## TRANSCRIPT OF RECORD

SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1951

No. 11

THE UNITED STATES, PETITIONER

VB.

MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARIE WUNDERLICH, ET AL.

ON WRIT OF CERTIORARI TO THE UNITED STATES COURT OF CLAIMS

PETITION FOR CERTIORARI FILED FEBRUARY 28, 1051 CERTIORARI GRANTED MAY 7, 1951

## SUPREME COURT OF THE UNITED STATES

OCTOBER TERM, 1950

## No. 584

## THE UNITED STATES, PETITIONER,

VS.

# MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARLE WUNDERLICH, ET AL.

ON PETITION FOR A WRIT OF CERTIORARI TO THE UNITED STATES

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#### In the Court of Claims

#### No. 46307

MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARIE WUNDERLICH, E. MURIELLE WUNDERLICH AND THEODORE WUNDERLICH, A PART-NERSHIP, TRADING UNDER THE NAME OF MARTIN WUNDERLICH COMPANY.

#### THE UNITED STATES

## PETITION—Filed February 14, 1945

To the Honorable the Court of Claims:

The plaintiffs, Martin Wunderlich, Ann M. Wunderlich, Marie Wunderlich, E. Murielle Wunderlich and Theodore Wunderlich, respectfully represent:

- 1. That they are engaged in the construction business as a partnership, Martin Wunderlich Company, and each partner is a citizen of the United States and a resident of the State of Minnesota.
- 2. On the 14th day of March, 1938, they entered into a contract with the United States, represented by S. O. Harper, Acting Chief Engineer of the Bureau of Reclamation, as contracting officer, for the construction, on a unit price basis, of what is known as the Vallecito Dam on the Pine River, Colorado. A copy of said contract, together with such parts of the attendant specifications as are pertinent, is annexed hereto as Exhibit "A". The full contract with complete specifications and contract drawings will later be produced in evidence and likewise marked Exhibit "A".
- 3. Under Paragraph 22 of the specifications the work was to be commenced within 30 calendar days after date of receipt of notice to proceed, and was to be completed within 1350 calendar days from date of such notice. The work was begun as agreed and was completed within the time stipulated. On completion of the work the contractors were required to and did give a release of all claims growing but of the contract, except those therein specially reserved, among which are the following:

(Note: The claims as numbered in the final release will be similarly numbered herein. Those claims that have been settled or abandoned will be omitted from this petition, but the original numbering will be retained.)

#### 1. Improper Borrow Pit Location

The contract drawings gave the locations for two (2) earth borrow pits and one (1) cobblestone borrow pit. What was known as Borrow Pit #1 was reasonably adjacent to the site of the dam to be built, and was used to exhaustion in obtaining the necessary earth for making the earth filled portions of the dam. Thereafter the contractors were required to use borrow materials from areas on the same side of the river but much nearer the river and beyond a swampy section of terrain which required the building of a road through and over the swamp and required the excavation of earth in areas where little or no dry materials could be obtained, but where the borrow materials were constantly very wet. The handling of materials of this moisture content involved extraordinary difficulties, extensive and constant repair of excavating and hauling equipment because of equipment becoming mired, and a continuous rebuilding of the road over the swamp and to the. site of the dam. The contractors protested being required to locate a borrow pit in this kind of area or to handle the kind of materials, described. When placed on the dam such materials could not be compacted or rolled until they had been processed and dried out, and this tended to delay the work of making the required fill of the dam, with a consequent inefficient use of necessary equipment. The borrow pits as located were in the vicinity of Stations 146+50, 141+50 and 140+50, not shown on the plans as befrow

43+00 43+50 33+50 areas.

The contractors allege that the contracting officer, through his representative, in addition to locating pits in the particular areas described, caused and required the contractors to move their equipment from one position to another therein, and then to another, and then return to the original position and repeat the operation, also that he required such excavation to extend to a depth where seepage from the adjacent river insured that the materials would be

constantly wet as herein described. The particular class of materials encountered at the stations indicated were of a kind required for use in portions of the fill, but there were other pits located elsewhere where similar materials but without the excessive moisture could have been obtained without the extraordinary difficulties encountered in obtaining the materials from these particular locations.

The contract price for earth excavation from borrow pits, which was Contract Item #14, was 23 cents per cubic yard, such price to cover both excavation and hauling. The estimated quantity of earth fill was 3,100,000 cubic yards. The quantity of wet materials

was 97,567 cubic yards, plus 2433 cubic yards used in fill across the swamp. The contract price of 23 cents on the 97,567 cubic yards was a wholly inadequate price for the excavation and handling of wet materials as encountered; and was far less than the actual cost of handling such materials. In addition, no payment at all was made for the 2433 cubic yards needed and used to construct

a necessary road across the swamp.

The contractors made claim for this particular excavation at the rate of 75 cents per cubic yard, which represented a reasonable and necessary cost thereof plus a reasonable profit for the work. The claim was disallowed by the contracting officer and on appeal to the Head of the Department such disallowance was affirmed. Claim as now made on this account is for \$52,559.75, which was the amount reserved in the final release. It represents the amount reasonably due the contractors on account of the extraordinary work performed under the radically changed conditions from those contemplated by the contract.

## 2. Rehandling Rejected Materials Stock-piled on the Left

At the time excavation for the cut-off trench was proceeding, the materials encountered were mostly suitable for use as fill in the dam. Some of them were not so suitable because of excessive moisture. Those that were too wet to be suitable were stockpiled by direction of the contracting officer. The portion of the materials from the cut-off trench on the left abutment that were suitable were placed as directed in the dam and all cobbles in excess of 5" in diameter were removed from the fill by the use of rake dozers mounted on tractors. This process as to these materials met the approval of the contracting officer.

Over-sized cobbles could have been removed from the wet materials here involved in exactly the same fashion as such cobbles were removed from those that were placed directly on the fill at the time they were excavated. The requirement of the contracting officer that the wet materials be stockpiled so as to permit them to par ially dry out was unreasonable and unnecessary and subjected the contractors to the expense of rehandling all such materials. The contractors protested the requirement and insisted that the materials were unsuitable for fill as and when excavated and, under the specifications, should be wasted. However, the contracting officer declined to permit this procedure, and required the stockpiling and subsequent rehandling as aforesaid.

The actual cost of this rehandling and screening operation, wholly unnecessary, plus 10 per cent was \$36,610.79, which is the amount reserved in the final release as aforesaid, and is the amount now

claimed.

## 6 / / 3. Stock-piled Materials from the Outlet Works

This claim also involves material which was too wet to be suitable at the time it was excavated. As excavation from the outlet works was proceeding, the contracting officer required that some of the excavated materials be placed as a blanket upstream from the dam, because they were too wet to be suitable for direct placement in the dam. Under Extra Work Order #6, dated December 6, 1940, payment was made for reloading a portion of these materials excavated from the outlet channel and hauling and placing in the depression between the dam and the upstream blanket at the rate of 35 cents per cubic yard. The remaining materials for which only claim is now made, though rehandled under the same circumstances, but placed in the fill of the dam, were not paid for on any basis other than as for original excavation. The work of. placing such materials in the so-called stock pile involved exactly similar operations and expense as placing the same materials directly into the embankment. The rehandling of this blanket material and placing it in the dam involved exactly the same operations as the rehandling and placing in the depression.

The actual cost of rehandling the materials that were hauledfrom the blanket to the dam was \$3,244.14, including 10 per cent

for overhead and profit. Claim is made for this amount.

## 4. Deepening and Widening Cut-Off Trench

When the work of digging the required cut-off trench on the left abutment was in progress, the contracting officer staked out the dimensions and the contractors proceeded to dig the trench on

the slopes and to the dimensions as so staked out.

The contracting officer was apparently not satisfied with the conditions encountered at the bottom of the trench as thus completed, and required the contractors to dig the same deeper than originally staked out, and with practically vertical sides. Digging a trench with vertical sides, as was here required, and to an excessive depth in shallow experimental lifts is a very much more difficult task than digging the trench as originally staked. Also this additional excavation was performed in the bottom of the trench, where it was muddy and there was little room to operate the equipment.

The contractors protested that the contract price of 35 cents per cubic yard (Contract Item #11) for ordinary trench excavation did not apply to this additional work as the deeper digging was an extra after the trench was staked out and was not comparable to the trench excavation as shown on the plans, and on which the contractors bid was based. The contractors claimed payment on the basis of cost-plus-10-percent as for extra work.

The contracting officer paid only at the regular contract rate of 35 cents per cubic yard and denied the claim for additional allowance. The contractors duly appealed to the Head of the Department, who affirmed the disallowance made by the contracting officer.

The contractors say that the amount reasonably and necessarily due them on this account is \$10,082.83, for which sum claim is now made.

## 5. Widening the Sides of Spillway

After excavation for the spillway had been completed to the dimensions indicated by the contract drawings and specifications as staked out by the contracting officer, the contracting officer decided that such excavation should be widened so as to permit the placement of certain drains. By Change Order #5 the contracting officer recognized in part the validity of the contractors' claim for additional allowance and by this Order allowed \$2,450, which apparently was computed at the contract rate for the yardage involved, but payment has not been made. Claim is now made only for the amount he approved.

## 6. Tile Drains, Cut-Off Trench

When work was near completion in the cut-off trench the contractors were required to and did install between Stations 5+50 and 7+75, at the left abutment, certain tile drains not shown on the plans or otherwise required from which seepage into the excavation was carried into a sump from which it could be pumped out of the work and into the river. The placing of the tile required special facilities in tamping the fill around same and then in grouting the tile. These drains were similar to other drains provided for in the plans at specifications and for which payment was allowed.

The contracting officer denied payment therefor on the ground that under Paragraph 5 of the specifications it was the obligation of the contractors to keep the foundations unwatered and suitably prepared for later fill. The work was done under the orders and directions of the contracting officer or his representative according to plans drawn by him and under his constant inspection and approval. It was not paid for. The contractors had made other arrangements for dewatering this portion of the work and these

arrangements for dewatering this portion of the work and these arrangements were adequate. The actual necessary cost of doing this extra work, with 10 per cent for profit and overhead, amounted to \$2,529.59. The refusal of the contracting officer to pay this amount was appealed to the Head of the Department who affirmed the disallowance. The claim was reserved in the final release and claim is now made for the amount stated.

The amounts included for materials in the item here claimed, as

well as under Claims 10, 7 and 8, are estimated. The Government. supplied the necessary materials for all these items but thereafter proceeded to deduct the alleged cost thereof from moneys otherwise due the contractors without itemizing the same or giving any statement as to how much materials were required for each item of work. The aggregate of materials under Items 6 and 10 and 7 and 8 will be correct, representing the actual cost as charged by the Government. As applied to the individual items there may be slight errors one way or the other.

## 7. Drains, Outlet Channel

When the work of excavating the outlet channel was in progress. the contractors were required to and did install a 4" tile drainage in the foundations thereof. The work was done under the orders and directions of the contracting officer. Payment was refused on the same ground as noted under the preceding item. The tile as placed and installed was identical with other drains provided for in the plans and specifications and for which payment was allowed, and became a part of the permanent work. The contractors were paid nothing therefor. The actual cost of this work, including materials originally furnished without charge by the United States Government, but the cost of which, on claim being made, was

deducted from the final estimate, plus 10 percent for profit and overhead amounted to \$362.03, for which sum claim is now made. The contracting officer refused payment and

the Head of Department denied the claim on appeal.

## 8. Drains, Spillway Channel.

In a part of the spillway when work was in progress, the contractors were required to place certain drains in the foundation and place therein a 4" tile embedded in gravel. This work was not shown on the plans or otherwise required. The contracting officer refused payment on the ground that the work was necessary for a proper foundation. The contractors claimed reimbursement of the actual cost which, with 10 percent for profit, amounted to \$2,319. The contracting officer denied the claim and the Head of the Department affirmed the denial. Claim is now made for this amount.

## 9. Change in Grade of Outlet Works Channel

This item is now abandoned as being too small to justify litiga-

## 10. Drains, Cut-Off Trench

This item of claim is of the same character as that described under Claim No. 6. When the work of preparing the cut-off trench between Stations 5+00 and 8+45, of the left abutment, was in progress and near completion, the contractors were required to make a necessary trench and install 4" and 6" drainage tile embedded in gravel in the foundation thereof. This work was not shown on the drawings or otherwise as required. The contracting officer required it to be done and the same was performed

under his direction and inspection and to be approval, and with his promise that payment would be made therefor. He later refused payment therefor on the ground that the work was necessary for a proper preparation of the foundations. It involved much extra work in the way of tamping and rolling fill, materials around the tile and around grout pipes left protruding therefrom so that the same could be filled with grout after the foundations were fully prepared. The total actual cost of the work, including 10 percent for profit and overhead, was \$2,750.28, no part of which has been paid the contractors.

The contracting officer refused payment as in the case of other similar items of claim on the ground that the work was necessary to insure dry foundations. The Head of Department affirmed the disallowance. Plaintiffs say that the work was extra work, not shown on the plans or otherwise required, and that the actual reasonable cost thereof was as stated, and claim is made in

this amount.

## 11. "French" Drain Stilling Basin and Spillway

As work in the stilling basin and along the right side of the spillway was proceeding at about Stations 26+75 to 27+25, the contracting officer directed the contractors to install in the bottom thereof what is known as a "French" drain, the same being the placing of gravel or crushed stone in a fashion that will allow the water to percolate through it. The order was given in an attempt to correct a situation resulting from a small amount of seepage near the vertical curve of the spillway. The contractors had already taken care of this situation by draining into a sump from which

the water was pumped away. The contractors say that there
was no occasion to construct this drain, but that the work
was ordered and was performed, under protest, under such
order to the satisfaction of the contracting officer or his representative, and that they have not been allowed nor paid anything on
account thereof.

The reasonable cost of the same amounts to \$265.24, for which claim is now made,

#### Claim No. 12

This claim abandoned.

## 13. Excavation and Separation of Materials in Spillway Above Station 15+00

The contracting officer approved and allowed the amount of this claim in the sum of \$4,125 and covered same by Change Order #5. The work involved the handling of 8,250 cubic yards, which at 50 cents per cubic yard, as agreed upon by the parties, amounted to the sum stated. The contractors did not accept the Change Order in question because it involved other items relating to claims asserted by a subcontractor, so that the Change Order as a whole could not be accepted without prejudice to the rights of such subcontractor as to such other items. The contracting officer and the contractors agreed that the amount fairly and justly due on account of excavation and separation of materials in the spillway above Station 15+00 which has not been paid for was and is \$4,125. The amount claimed was reserved in the final release and the same amount, \$4,125, is now claimed.

## 13 14. Extra Sloping of Sides of Spillway

After the spillway channel had been excavated to the dimensions and on the slopes indicated by stakes placed by the contracting officer, the stakes were changed and the contractors were required to come back and excavate to the slopes as so changed. A total of 4776 cubic yards additional excavation was thus moved from outside of the slopes stake lines as first set and outside of the slopes as originally excavated. The work was done by order of and under the direction of the contracting officer, who denied payment for the extra work on the ground that the contractors themselves had inadvertently over-excavated between certain stations. The contractors deny this and say that the work was done strictly as staked out and that the work as finally required involved the matter of what in excavating parlance is known as "feathering out", that is, the work of changing from one slope to another without any break in the lines. Written orders to do the work as changed were refused by the contracting officer. The contractors did the work under protest.

The contractors were paid at the regular excavation rate for 4776 cubic yards involved, amounting to \$1,671.60. They say that the work as performed was rendered far more difficult and expensive than the regular slope excavation contemplated by the contract and that they were entitled to be paid for the difference between what was allowed and what should properly have been allowed,

amounting to \$1,329.92; for which claim is now made. The contracting officer decided that if anything was due it was only \$548.72. The contractors say that they were entitled to the full amount claimed, and claim is made accordingly.

Claims Nos. 15 and 16

These items of claim are not now asserted.

#### 17. Cobblestone Excavation and Fill

The contract drawings, Sheet 191-D-45, give the location of two (2) so-called "earth embankment borrow pit" areas, and of one (1) "cobble borrow pit" area. The specified earth embankment borrow area, known as Borrow Pit No. 2, was located to the left of the river and upstream from the dam. The specified cobble borrow pit area was likewise to the left of the river but immediately below and

adjacent to the site of the dam.

The so-called "earth embankment berrow pit" area No. 2, contained a very excellent grade of earth materials suitable for fill on the dam, but only to a limited depth, below which was found cobblestone materials containing a relatively small amount of earth. The estimated quantities for cobblestone fills were 80,000 cubic yards (Contract Item #20) and 275,000 cubic yards (Contract Item #21). The first item was to be placed at down-stream toe of the embankment and the second on slopes of the embankment. In addition to the excavation price the contractors were to be paid for placement in fill for the first at 25 cents per cubic yard and for the second at 15 cents per cubic yard, with allowable overhaul allowance if brought from a greater distance than 2,500 feet (Paragraph 52 of the specifications) from the point placed.

After excavating the earth borrow material from Borrow Pit No. 2, the contractors were required to and did continue excavating from the same locations but at a lower elevation, the remaining

materials, consisting very largely of cobbles of more than 2½ inches in diameter, which under paragraph 57 of the specifications were cobbles of the required size for cobble fill in the dam. The locations from which these materials were obtained were in excess of 2,500 feet from the point of placement, and under Paragraph 52 of the specifications, the contractors were entitled not only to the contract price for cobble borrow excavation but to the contract price for overhaul of cobbles brought to the fill from a distance in excess of 2,500 feet from point of placement. However, the contracting officer, because Pit No. 2 was labelled "an earth pit" classified and paid for the cobble borrow material excavated therefrom as "earth excavation" and paid only the earth excavation rate for all such materials, with no allowance for overhaul because

of the excessive distance hauled. The contractors, beside the excavation so required, were required to and did go to the expense of separating the cobbles from the earth contained therein. No materials for cobble fill in the dam, were obtained from the specified regular cobble borrow pit, but all cobble materials were obtained. from Pit No. 2, labelled on the drawings as an "earth borrow pit."

The contractors say that they excavated a total of 79,847 cubic yards of cobble borrow material in 1939, and 846,891 cubic yards in 1940, from Pit No. 2; all of which was used in the dam construction, and for which they were paid only at the rate designated for earth borrow excavation. They duly protested the requirement that they excavate cobble borrow material from the so-called "earth pit", and also the ruling that they be paid only for earth excavation for so doing. The contracting officer recognized the contractors' protest that the work was not "earth borrow" excavation and issued

. Change Order No. 3 which provided that an adjustment 16 would be made because of the changed condition. The contractors have made demand for payment for the 79,847 cubic yards excavated in 1939, at the cobble borrow price of 35 cents per cubic yard, and for the 1940 cobble borrow excavation at costplus-10-percent. Chough the contracting officer recognized that the material in question was not "earth borrow" he made payment in the so-called final estimate, only as for "earth borrow" material and has recommended an additional allowance of \$44,208.85, as representing an equitable adjustment on account of the material in question being cobble borrow material and not being earth borrow material as shown on the drawings.

The contractors declined to accept the allowance so recommended, and say that the actual reasonable amount due them in addition to what has already been paid on account of the excessive requirement as herein described was \$181,721.10, no part of which has been paid, and they make claim for this amount. The amount stated is at the contract rate for cobble borrow material obtained in 1939, and at cost-plus-10-percent for cobble borrow material excavated in 1940 from Borrow Pit No. 2, as extended, both less the payment already made as for "earth borrow" material. The amount now claimed, \$181,721.10, was reserved in the final release, and is in addition to partial payments already paid.

## 18. Excavation Adjacent to Trash Rack

The findings of fact by the contracting officer allow this claim in the amount of \$466.40. The claim as thus allowed is satisfactory to plaintiff but same has not been paid. Claim is therefore now made for the amount so approved by the contracting officer

and Head of Department.

#### Claim No. 19

No claim reserved in the final release under this item.

#### 20. Cut-Off Trench Excavation

Item 3 of the Contract Schedule contemplated an estimated 200,000 cubic yards of stripping for embankment at 20 cents per cubic yard. Item 11 of the Contract Schedule contemplated an estimated 185,000 cubic yards of excavation for embankment toe drains "and cut-off trench" at 35 cents per cubic yard. The contractors proceeded to strip the area of dam foundations and the places where the cut-off trench was to be dug to the satisfaction of and as directed by the contracting officer or his representative. The quantity of stripping material so moved was measured by the contracting officer and thereafter the contractors excavated the cutoff trench to the dimensions shown on the plans or as staked out by the contracting officer. When this trench was thus completed, it developed that the materials on the side walls thereof were considered objectionable by the contracting officer as they did not provide suitable cut-off, and he thereupon directed the contractors to very much widen the trench as excavated; and for the materials removed in this widening allowed and paid only as stripping. The contractors discovering that their current estimate did not include all the trench excavation that had been performed, wrote the contracting officer's representative on the work under date of July 15, 1939, asking that he include the full amount of cut-off trench exca-. vation so far performed in the July estimate. This was not

18 done. Of the total of 400,032 cubic yards of actual trench excavation performed only 229,981 cubic yards have been paid for as trench excavation at the contract price therefor, namely, 35 cents per cubic per cubic yard. The balance of such excavation, namely, 170,051 cubic yards, has erroneously been paid for at the contract price for stripping, 20 cents per cubic yard. On further consideration an additional allowance of \$1,279.95 was approved by the contracting officer and affirmed by the Head of Department on appeal, but this has not been paid to or accepted by plaintiffs.

The contractors say that all of the excavation below the required stripping operations was cut-off trench excavation and not stripping and should have been paid for at 35 cents per cubic yard for excavation instead of at 20 cents for stripping as paid, and that the balance properly due and unpaid on such account is \$25,507.65, which includes the amount approved for allowance, \$1,279.95, which though approved has not been paid.

The materials involved were strictly trench excavation and not from above or over such trench, and could properly be classified

only as "cut-off trench excavation." The contractors therefore claim \$25,507.65.

## 21. Extra Cost of Mixing Borrow Pit Materials

Paragraph 55 (b) of the specifications provides that the earth fillportion of the dam should consist of a mixture of clay, sand and gravel available from borrow pits and from excavations required to be made from other parts of the work, and that "the contractor's operations in the excavation of materials for the earth fill shall

be such as will result in an acceptable gradation of the materials when compacted in the fill." The contracting officer was to designate the depth of cut in all parts of the borrow pits necessary for obtaining the necessary gradation of materials, and the cuts were to be made to such designated depth. It is further provided (Paragraph 55(b) of specifications) that "each load of earth-fill material delivered on the embankment shall be the equivalent of a mixture of materials obtained from an approximately uniform strip or cutting from the full height of the face of the excavation."

The contractors proceeded to excavate from the borrow pits strictly as thus provided, the contracting officer specifying the depths to which excavation would be carried. Making a vertical cut in the pits could and did result in an adequate mixture of the different strata of materials found in such pits. However, the contracting officer was not satisfied with the gradation effected by this prescribed operation and required the contractors, after making a cut with their shovel, to-drop the load, make another cut, with additional repetition of the operation and then to load the materials. as thus cut and dumped. This requirement mecessarily greatly slowed operations and resulted in the double handling of most of the materials excavated. The contractors say that the operation required by the contracting officer was wholly unnecessary; that mixing it strictly as provided by the contract gave as good a result as it was possible to obtain; and that doing the work as thus required added very greatly to the expense not only of excavating from the pits but of loading the excavated materials for transportation to the fill. This requirement resulted in the hauling equipment having to stand idle at times and in the prolonged use of excavating equipment, both of which were expensive and

20 both of which for economical operation should have been kept constantly productive.

The contractors say that the actual increased cost to them by this arbitrary requirement of the contracting officer amounted to \$68,277.11, for which claim is now made. This sum was reserved in the final release. In this case, as in others, the contractors duly protested the requirements of the contracting officer, but were given no written order to do the work as orally directed.

## Claim No. 22

No claim reserved in final release under this number.

## 23. Moving Back Into Borrow Pit No. 1

After the contractors had completed excavation from Borrow Pit No. 1 to the grades and dimensions specified by the contracting officer, leaving therein only certain materials which the contracting officer then decided were unsuitable for fill and after they had moved their equipment to other locations, the contracting officer required them to move back into Borrow Pit No. 1 and excavate what had previously been classed as unsuitable materials. This excavation in regular course could have been performed at regular contract rates. As required, it cost the contractors approximately \$1,000 in excess of what they were allowed and paid on account of such re-excavation. They protested the requirement that they move back into Borrow Pit No. 1 and excavate these scattered materials, but the contracting officer persisted in the requirement and the work was done as directed and claim was made on the contracting officer for the allowance of the cost of doing this work, less what was

paid. He denied the claim but conceded that if anything

21 was due the amount was \$946.20.

No written order was given requiring the contractors to do this work and no written protest was filed. The claim was denied by the contracting officer and on appeal the denial was affirmed by the Head of Department.

Claim is now made for the actual increased cost amounting to \$1,000, which is the sum reserved in the final release.

## Claims Nos. 24, 25 and 26

No reservations made in the final release under these numbers.

## · 27 Claim for Rock Excavation

Paragraph 41 of the specifications defines what shall constitute rock excavation and what shall constitute common excavation.

Rock excavation was to consist of: "All solid rock in place which cannot be removed until loosened by blasting, barring, or wedging and all boulders or detached pieces of solid rock more than one cubic yard in volume." The same was to be classed and paid for as rock excavation.

Paragraph 44 of the specifications gave the requirements for stripping for the embankment as follows:

"The entire area to be occupied by the dam " shall be stripped or excavated to a sufficient depth to remove all materials not suitable for the foundation, as determined by the contracting officer, and only to the lines and grades established by the contracting officer."

22 The unsuitable materials thus to be removed to include:

"Top soil, all rubbish, vegetable matter of every kind, roots, and all other perishable or objectionable materials which might interfere with the bonding of the embankment with the foundation \* • • "

In excavating the cut-off trenches 1,206 cubic yards of large boulders in excess of 1 cubic yard in size were encountered and excavated and moved. These materials were classed by the contracting officer as "common excavation" and paid for at the rate of 35 cents per cubic yard. The contractors say that such excavation should have been classed as "rock excavation" (Item 12, Contract Schedule) and paid for at \$2.00 per cubic yard.

In stripping for the dam foundations and particularly along and over the river bed 4,665 cubic yards of boulders in excess of 1 cubic yard in size were encountered and removed. These likewise were classed by the contracting officer as "stripping" (Item 3, Contract Schedule) and paid for at 20 cents per cubic yard.

The contractors say that this should have been classed as "rock excavation" (Item 12, Contract Schedule) and paid for at \$2.00 per cubic yard.

In addition 4,000 cubic yards of boulders of less than 1 cubic yard in volume which were moved in the stripping operation have not been computed or allowed in estimates on any basis. Payment is due therefor at the stripping price of 20 cents per cubic yard.

The contractors say that they have been underpaid for the work actually done in the respects noted in the amount of \$11,186.90, which amount is now claimed. This claim was reserved in the final release.

Claim No. 28

This item of claim is not now asserted.

Claims Nos. 29 and 30

No reservations made in final release for these items.

### 31. Excavating and Backfilling Downstream from Station 15+00, Spillway

In the progress of the work the contracting officer duly staked out the slopes at and below Station 15+00 in the spillway, and the contractors endeavored to excavate to the slopes as so staked out. Owing to the character of the materials in that location they would not stand up at the slopes indicated, and the contractors were required to and did remove materials to the slope on which they would stand. Also below the top of the spillway wall it was necessary for the contractors to place additional backfill to bring it to the slope excavated. The attention of the contracting officer was called to the situation, but he failed and neglected to change the slopes as originally staked out, and paid for excavation only to such slopes.

The contractors say that the slopes as staked out were not to practical dimensions; that the contracting officer was arbitrary and unreasonable in failing and neglecting to specify a practical slope. The amount of materials excavated and backfilled in excess of those staked out and paid for at contract rates amounts to \$3,176.54, and claim is made for this sum, which is the one reserved in the final release.

## 24 32. Extra Cost Ditches for Drains

In due course of operations the contractors were ready and had equipment available for excavating transverse joint ditches in spill-way. By letter of April 17, 1940, the contractors were directed to defer the digging of these ditches and when they were later directed to come back and dig them other work, namely, the building of concrete walls in the vicinity, much delayed and interfered with the orderly performance of the trench work. The contractors duly protested the requirement as an interference with the orderly and best method of doing the work. They kept an account of the actual cost of doing it as changed and made claim therefor, which was denied by the contracting officer. On appeal such denial was affirmed by the Head of Department.

The actual cost, including 10 percent, allowable profit, is \$2,279.92, which amount is now claimed. This amount was reserved in the final release.

## 33. Change in Plans Calling for Extra Widening in Spillway

After excavating in the spillway had been completed between Stations 6+90 and 12+12, except for minor dressing up, the contractors were required by the contracting officer to widen the excavation as thus previously completed, and they were given changes in plans showing such widening.

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The actual cost of doing this work over what they were allowed at contract rates for the excavation involved was \$1,360.72, which amount is now claimed. This claim was reserved in the final release.

### 25 34. Replacing Backfill Cut-Off Wall, Right Abutment

After the contractors had placed and thoroughly tamped backfill along the cut-off wall and in the cut-off trench at the right abutment, they were required to remove this for the convenience of the Government; and later on had to replace same and again compact the materials as required under the specifications. They were not allowed any extra compensation for the removal and replacement of this material, which was solely for the benefit of the Government and serving no beneficial purpose so far as the contractors' progress of the work was concerned.

The actual cost of the work here involved was \$997.92, which amount is now claimed. This claim was reserved under the final release.

## 35. Extra Rolling of Parts of Embankment Fill

Paragraph 55(f) of the specifications gave the requirements as to rolling of materials in the fill. It was therein required that the tamping roller should be moved over the fill 12 times and that "if the moisture content is greater or less than the optimum for compaction, the rolling shall not proceed except with the specific approval of the contracting officer, and, in that event, additional rolling shall be done, as directed by the contracting officer, to obtain the required compaction and no adjustment in price shall be made therefor."

The same paragraph further provided:

"If, with the optimum moisture content, it is found desirable to roll each six inch layer more or less than 12 times to obtain the desired compaction, the number of rollings shall be changed accordingly, as directed by the contracting officer, and adjustment will be made in the unit price bid for compacted embankment in the amount of 25/100 cents per cubic yard for each additional or lesser number of rollings required."

The contractors proceeded to roll fill as directed in six-inch layers, and in no case were they permitted to begin rolling such materials until the contracting officer or his representative decided that the moisture content was at the optimum for such rolling. Notwithstanding, materials were thus rolled only and as the contracting officer required. Whenever compaction satisfactory to his require-

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ments was not obtained by the 12 required rollings he required numerous additional rollings to be made and no allowances have been made for such extra rollings. The contracting officer was given a record of the dates, locations, number of rollings and all other pertinent data, but failed to make any allowance for such rollings.

The contractors say that the extra rollings were performed only under the direction of the contracting officer and only after he had determined that the moisture content was at the optimum, and that under the provisions of the contract (quoted above), they were entitled to be paid at ¼ cent per cubic yard for all materials thus rolled. They say that there is a balance of \$1,500.33 due them and unpaid, for which claim is now made. The claim was reserved in the final release.

## 36. Rock Excavation Stations 2+25-5+30.

In this area the contractors encountered and were required to excavate 6,370 cubic yards of materials, which was solid rock as defined in Paragraph 41 of the specifications, and hence to be classed as rock excavation. During the process of doing the work this mate-

rial was correctly estimated and paid for as "rock excava
27 tion". At a later date, estimates were made without the
assent of plaintiffs, changing this from "rock" to "earth"
excavation. The contractors made claim for the work on its true
basis, i.e., for "rock excavation", but such claim was disallowed by
the contracting officer, and on appeal the disallowance was affirmed
by the Head of Department.

Claim is now made for the unpaid balance due amounting to \$2,556.70, which is the same claim reserved in the final release.

## 37. Rock Excavation, Spillway

This item grew out of circumstances very similar to those enumerated under Claim No. 31, except that the work involved was between Station 1+75 and 15+00 in the spillway. The materials encountered and removed were rock as defined by Paragraph 41 of the specifications. The rock in question was for the most part large boulders or solid blocks of stone which the contracting officer required to be removed because it contained objectionable seams, and the removal of which carried excavation beyond the neat lines. The contracting officer made payment only to the theoretical lines for both excavation and backfill, and not to the actual lines of the work as required.

Claim is now made for payment of all excavation and backfill, which amounts to an additional \$1,427.09, which is the amount reserved in the final release.

#### Claim No. 38

This item of claim reserved in the release will not be pressed.

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Claim, No. 39

Claim abandoned.

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## 40. Extra for Wet Clay, Borrow Pit No. 1

Between May 24 and August 1, 1940 the contractors were required to and did remove a large yardage of very wet clay materials from Borrow Pit No. 1, for which they were allowed and paid, under Item 14, Contract Schedule, at 23 cents per cubic yard. The contractors protested against being required to remove these wet clay materials as doing so meant greatly increased expenses in the matter of handling, transportation and placement of such materials, and it was outside the requirements of the specifications. Such clayey materials could not be and were not allowed to be compacted on the fill until they had been dried out. Working with materials of this kind meant greatly increased expenses and delay to the work of the contractors. They protested the requirement and insisted that it was the obligations of the Government to furnish a workable borrow pit at all times, and that these materials did not meet that requirement.

The increased cost incident to handling these wet materials was \$13,200 (220,000 cubic yards at an increased cost of 6 cents per yard), for which claim is now made. This is the amount reserved

in the final release.

## 41. Additional Cost Unwatering Gate Chamber and Concreting Gate Plug

This item of claim was approved by the conficacting officer and Change Order No. 4 issued, covering the \$500 then agreed upon as the amount due. The contractors could not accept such Change Order because other matters as to which there were controversies were included therein. The contracting officer found as a fact that the additional work was done, and that the cost thereof was reasonably \$500, and agreed to allow same, but the allowance so agreed upon has not been paid. This amount is now claimed.

## 42. Claim of Subcontractor

In the final release the sum of \$15,000 was reserved as covering "such claims as Dutton, Kendall & Hunt have asserted or may assert as a result of the performance of their subcontract." The subcontractor has been called upon for details of such claims, but

has not furnished same. This item of claim may therefore be abandoned.

#### 43. Interest

This claim was reserved in the release but is now abandoned as untenable.

No other action has been had on said claim in Congress or by any of the departments; no person other than the plaintiffs is the owner thereof or interested therein; no assignment or transfer of this claim, or of any interest therein, has been made; the plaintiffs are justly entitled to the amount herein claimed from the United States, after allowing all just credits and offsets; the plaintiffs have at all times borne true allegiance to the Government of the United States and have not in any way voluntarily aided, abetted, or given encouragement to rebellion against the said Government. The

plaintiffs are citizens of the United States. And the plain-

30 tiffs claim \$433(\$87.45.

King & King, Attorneys for Plaintiffs.

District of Columbia, ....., ss

George R. Shields, being duly sworn, deposes and says: I am one of the attorneys for the plaintiff company plaintiffs in this case. I have read the above petition and the matters therein stated are true, to the best of my knowledge, information and belief.

George R. Shields.
Signature.

Subscribed and sworn to before me this 14th day of February, 1945.

VESLA HARTWELL. Official Signature.

Notary Public.
Official Title.

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## IN THE COURT OF CLAIMS

MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARIE WUNDERLICH, E. MURIELLE WUNDERLICH AND THEODORE WUNDERLICH, a partnership trading under the name of Martin Wunderlich Company,

v

## THE UNITED STATES

#### EXHIBIT "A" TO PETITION

#### CONTRACT

#### (Construction)

Contract for construction of Vallecito Dam, Amount \$2,115,870.00. Place—Pine River project, Colorado.

## CONTRACT FOR CONSTRUCTION

This contract, entered into this 14th day of March, 1938, by the United States of America, hereinafter called the Government, represented by the contracting officer executing this contract, and Martin Wunderlich Company, a partnership consisting of Martin Wunderlich, Ann M. Wunderlich, Marie Wunderlich, E. Murielle Wunderlich and Theodore Wunderlich, of the city of Jefferson City, in the State of Missouri, hereinafter called the contractor, witnesseth that the parties hereto do mutually agree as follows:

ARTICLE 1. Statement of work.—The contractor shall furnish the materials, and perform the work under the schedule of Specifications No. 705 for the consideration of the prices stated in the schedule, in strict accordance with the specifications, schedules, and drawings, all of which are made a part hereof and designated as follows:

Specifications No. 705, and supplemental notices to bidders

32 dated November 10 and November 29, 1937.

ARTICLE 2. Specifications and drawings.—The contractor shall keep on the work a copy of the drawings and specifications and shall at all times give the contracting officer access thereto. Anything mentioned in the specifications and not shown on the drawings, or

shown on the drawings and not mentioned in the specifications, shall be of like effect as if shown or mentioned in both. In case of difference between drawings and specifications, the specifications shall govern. In any case of discrepancy in the figures, drawings, or specifications, the matter shall be immediately submitted to the contracting officer, without whose decision said discrepancy shall not be adjusted by the contractor, save only at his own risk and expense. The contracting officer shall furnish from time to time such detail drawings and other information as he may consider necessary, unless otherwise provided. Upon completion of the contract the work shall be delivered complete and undamaged.

ARTICLE 3. Changes.—The contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings and/or specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be medified in writing accordingly. No change involving an estimated increase or decrease of more than Five Hundred Dollers shall be ordered unless approved in writing by the head of the department or his duly authorized representative.

Any claim for adjustment under this article must be asserted within 10 days from the date the change is ordered: Provided,

however, That the contracting officer, if he determines that the facts justify such action, may receive and consider, and with the approval of the head of the department or his duly authorized representative, adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in article 15 hereof. But nothing provided in this article shall excuse the contractor from proceeding with the

prosecution of the work so changed.

ARTICLE 4. Changed conditions.—Should the contractor encounter, or the Government discover, during the progress of the work subsurface and/or latent conditions at the site materially differing from those shown on the drawings or indicated in the specifications, or unknown conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inhering in the work of the character provided for in the plans and specifications, the attention of the contracting officer shall be called immediately to such conditions before they are disturbed. The contracting officer shall thereupon promptly investigate the conditions, and if he finds that they do so materially differ the contract shall, with the written approval of the head of the department or his duly authorized representative, be modified to provide for any increase or decrease of cost and/or difference in time resulting from such conditions.

ARRICLE 5. Extras.—Except as otherwise herein provided, no charge for any extra work or material will be allowed unless the same has been ordered in writing by the contracting officer and the price stated in such order.

ARTICLE 6. Inspection.—(a) All material and workmanship (in not otherwise designated by the specifications) shall be subject to

inspection, examination, and test by Government inspectors at any and all times during manufacture and/or construction

34 and at any and all places where such manufacture and/or construction are exried on. The Government shall have the right to reject defective material and workmanship or require its correction Rejected workmanship shall be satisfactorily corrected and rejected material shall be satisfactorily replaced with proper material without charge therefor, and the contractor shall promptly segregate and remove the same from the premises. If the contractor fails to proceed at once with the replacement of rejected material and/or the correction of defective workmanship the Government may, by contract or otherwise, replace such material and/or correct such workmanship and charge the cost thereof to the contractor, or may terminate the right of the contractor to proceed as provided in article 9 of this contract, the contractor and surety being liable for any damage to the same extent as provided in said article 9 for terizinations thereunder.

(b) The contractor shall furnish promptly without additional charge, all reasonable facilities, labor, and materials necessary for the safe and convenient inspection and test that may be required by the inspectors. All inspection and tests by the Government shall be performed in such manner as not to unnecessarily delay the work. Special, full size, and performance tests shall be as described in the specifications. The contractor shall be charged with any additional cost of inspection when material and workmanship is not ready at

the time inspection is requested by the contractor.

(c) Should it be considered necessary or advisable by the Government at any time before final acceptance of the entire work to make an examination of work already completed, by removing or tearing out same, the contractor shall on request promptly furnish all necessary facilities, labor, and material. If such work is found to be defective in any material respect, due to fault of the contrac-

35 tor or his subcontractors, he shall defray all the expenses of such examination and of satisfactory; reconstruction. If, however, such work is found to meet the requirements of the contract, the actual cost of labor and material necessarily involved in the examination and replacement, plus 15 percent, shall be allowed the contractor alid he shall, in addition, if completion of the work has been delayed thereby, be granted a suitable extension of time on account of the additional work involved.

(d) Inspection of material and finished articles to be incorporated

in the work at the site shall be made at the place of production, manufacture, or shipment, whenever the quantity justifies it, unless otherwise stated in the specifications; and such inspection and acceptance, unless otherwise stated in the specifications, shall be final, except as regards latent defects, departures from specific requirements of the contract and the specifications and drawings made a part thereof, damage or loss in transit, fraud, or such gross mistakes as amount to fraud. Subject to the requirements contained in the preceding sentence, the inspection of material and workmanship for final acceptance as a whole or in part shall be made at the site.

ARTICLE 7. Materials and workmanship.—Unless otherwise specifically provided for in the specifications, all workmanship, equipment, materials, and articles incorporated in the work covered by this contract are to be of the best grade of their respective kinds for the purpose. Where equipment, materials, or articles are referred to in the specification as "equal to" any particular standard, the contracting officer shall decide the question of equality. The contractor shall furnish to the contracting officer for his approval the name of the manufacturer of machinery, mechanical and other equipment which he contemplates incorporating in the work, together with their performance capacities and other pertinent infor-

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mation. When required by the specifications, or when called for by the contracting officer, the contractor shall furnish the contracting officer for approval full information concerning the materials or articles which he contemplates incorporating in the work. Samples of materials shall be submitted for approval when so directed. Machinery, equipment materials, and articles installed or used without such approval shall be at the risk of subsequent rejection. The contracting officer may require the contractor to dismiss from the work such employee as the contracting officer deems incompetent, careless, insubordinate, or otherwise objectionable.

ARTICLE 8. Superintendence by contractor.—The contractor shall give his personal superintendence to the work or have a competent foreman or superintendent, satisfactory to the contracting office, on the work at all times during progress, with authority to act for him.

ARTICLE 9. Delays—Damages —If the contractor refuses or fails to prosecute the work, or any separable part thereof, with such diligence as will insure its completion within the time specified in article 1, or any extension thereof, or fails to complete said work within such time, the Government, may, by written notice to the contractor, terminate his right to proceed with the work or such part of the work as to which there has been delay. In such event the Government may take over the work and prosecute the same to completion, by contract or otherwise, and the contractor and his

sureties shall be liable to the Government for any excess cost occasioned the Government thereby. If the contractor's right to proceed is so terminated, the Government may take possession of and utilize in completing the work such materials, appliances, and plant as may be on the site of the work and necessary therefor. If the Government does not terminate the right of the contractor to proceed, the contractor shall continue the work, in which event the actual damages for the delay will be impossible to determine and in lieu thereof the contractor shall pay to the

Government as fixed, agreed, and liquidated damages for eachcalendar day of delay until the work is completed or ac-

cepted the amount as set forth in the specifications or accompanying papers and the contractor and his sureties shall be liable for the amount thereof: Provided, That the right of the contractor to proceed shall not be terminated or the contractor charged with liquidated damages because of any delays in the completion of the work due to unforesecable causes beyond the control and without the fault or negligence of the contractor, including, but not restricted to, acts of God, or of the public enemy, acts of the Government, acts of another contractor in the performance of a contract with Government, fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, and unusually severe weather or delays of subcontractors due to such causes, if the contractor shall within 10 days from the beginning of any such delay (unless the contracting officer, with the approval of the head of the department or his duly authorized representative, shall grant a further period of time prior to the date of final settlement of the contract) notify the contracting officer in writing of the causes of delay, who shall ascertain the facts and the extent of the delay and extend the time for completing the work when in his judgment the findings of fact justify such an extension, and his findings of fact thereon shall be fined and conclusive on the parties hereto, subject only to appeal, within 30 days, by the contractor to the head of the department concerned, or his duly authorized representative whose decision on such appeal as to the facts of delay and the extension of time for completing the work shall be final and conclusive on the parties hereto.

ARTICLE 10. Permits and care of work.—The contractor shall, without additional expense to the Government, obtain all required licenses and permits and be responsible for all damages to persons or property that occur as a result of his fault or negligence in connection with the prosecution of the work, and shall be responsible for the proper care and protection of all materials delivered and

work performed until completion and final acceptance.

38 ARTICLE 11. Eight-hour law—Convict labor.—(a) No laborer or mechanic doing any part of the work contemplated by this contract, in the employ of the contractor or any subcontractor contracting for any part of said work contemplated, shall be

required or permitted to work more than eight hours in any one calendar day upon such work at the site thereof. For each violation of the requirements of this article a penalty of five dollars shall be imposed upon the contractor for each laborer or mechanic for every calendar day in which such employee is required or permitted to labor more than eight hours upon said work, and all penalties thus imposed shall be withheld for the use and benefit of the Government: Provided, That this stipulation shall be subject in all respects to the exceptions and provisions of U. S. Code, title 40, sections 321, 324, 325, and 326, relating to hours of labor.

(b) The contractor shall not employ any person undergoing sen-

atence of imprisonment at hard labor.

ARTICLE 12. Covenant against contingent fees.—The contractor warrants that he has not employed any person to solicit or secure this contract upon any agreement for a commission, percentage, brokerage, or contingent fee. Breach of this warranty shall give the Government the right to terminate the contract, or, in its discretion, to deduct from the contract price or consideration the amount of such commission, percentage, brokerage, or contingent fees. This warranty shall not apply to commissions payable by contractors upon contracts or sales secured or made through bona fide established commercial or selling agencies maintained by the contractor for the purpose of securing business.

ARTICLE 13.: Other contracts.—The Government may award other contracts for additional work, and the contractor shall fully cooperate with such other contractors and carefully fit his own work to that provided under other contracts as may be directed by the contracting officer. The contractor shall not commit or permit any act which will interfere with the performance of work by any other

contractor.

ARTICLE 14. Officials not to benefit.—No Member of or Delegate to Congress, or Resident Commissioner, shall be admitted to any share or part of this contract or to any benefit that may arise therefrom, but this provision shall not be construed to extend to this contract if made with a corporation for its general benefit.

ARTICLE 15. Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

ARTICLE 16. Payments to contractors.—(a) Unless otherwise provided in the specifications, partial payments will be made as the work progresses at the end of each calendar month, or as soon

thereafter as practicable, on estimates made and approved by the contracting officer. In preparing estimates the material delivered on the site and preparatory work done may be taken into consideration.

(b) In making such partial payments there shall be retained 10 percent on the estimated amount until final completion and acceptance of all work covered by the contract: Provided, however, That the contracting officer, at any time after 50 percent of the work has been completed, if he finds that satisfactory progress is being made, may make any of the remaining partial payments in full: And provided further, That on completion and acceptance of each separate building, vessel, public work, or other division of the contract, on which the price is stated separately in the contract, payment may be made in full, including retained percentages thereon, less authorized deductions.

(c) All material and work covered by partial payments made shall thereupon become the sale property of the Government, but this provision shall not be construed as relieving the contractor from the sole responsibility for the care and protection of materials and work upon which payments have been made or the restoration of any damaged work, or as a waiver of the right of the Government to require the fulfillment of all of the terms of

the contract.

(d) Upon completion and acceptance of all work required hereunder, the amount due the contractor under this contract will be paid upon the presentation of a properly executed and duly certified voucher therefor, after the contractor shall have furnished the Government with a release, if required, of all claims against the Government arising under and by virtue of this contract, other than such claims, if any, as may be specifically accepted by the contractor from the operation of the release in stated amounts to be set forth therein.

ARTICLE 17. Rate of wages (in accordance with Public Act No. 403, 74th Cong., approved Aug. 30, 1935, this article shall apply if the contract is in excess of \$2,000 in amount and is for the construction, alteration, and/or repair, including painting and decorating, of a public building or public work within the geographical limits of the States of the Union or the District of Columbia).—

(a) The contractor or his subcontractor shall pay all mechanics and laborers employed directly upon the site of the work, unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account, the full amounts accured at time of payment, computed at wage rates not less than those stated in the specifications, regardless of any contractual relationship which may be alleged to exist between the contractor or subcontractor and such laborers and mechanics; and the scale of wages to be paid shall be posted by the contractor in a prominent

and easily accessible place at the site of the work. The contracting officer shall have the right to withhold from the contractor so much of accrued payments as may be considered necessary by the contracting officer to pay to laborers and mechanics employed by the contractor or any subcontractor on the work the

difference between the rates of wages required by the contract to be paid laborers and mechanics on the work and the rates of wages received by such laborers and mechanics and not refunded to the

contractor, subcontractors, or their agents.

(b) In the event it is found by the contracting officer that any laborer or mechanic employed by the contractor or any subconstructor directly on the site of the work covered by the contract has been or is being paid a rate of wages less than the rate of wages required by the contract to be paid as aforesaid, the Government may, by written notice to the contractor, terminate his right to proceed with the work or such part of the work as to which there has been a failure to pay said required wages and prosecute the work to completion by contract or otherwise, and the contractor and his sureties shall be liable to the Government for any excess costs occasioned the Government thereby.

ARTICLE-18. Domestic preference.—In the performance of the work covered by this contract the contractor, subcontractors, material men or suppliers, shall use only such unmanufactured articles, materials, and supplies as have been mined or produced in the United States, and only such manufactured articles, materials, and supplies as have been manufactured in the United States substantially all from articles, materials, or supplies mined, produced, or manufactured, as the case may be, in the United States. The foregoing provision shall not apply to such articles, materials, or supplies of the class or kind to be used or such articles, materials, or supplies from which they are manufactured, as are not mined, produced, or manufactured, as the case may be, in the United States in sufficient and reasonably mailable commercial quantities and of a satisfactory quality, or to such articles, materials, or supplies as

may be accepted by the head of the department under the proviso of title III, section 3, of the act of Congress approved

March 3, 1933 (U. S. Code, title 41, sec. 10b).

ARTICLE 19. Nonrebate.—(a) The contractor shall furnish to the Government representative in charge at the site of the work covered by this contract, or if no Government representative is in charge at the site, shall mail to the Federal agency having control of the project, within 3 days after the payment of each and every weekly pay roll, an affidavit in the form prescribed by regulations issued jointly by the Secretary of the Treasury and the Secretary of the Interior under date of January 8, 1935, to be effective on and after January 15, 1935, or any modification thereof pursuant to the act of June 13, 1934 (48 Stat. 948), sworn to by the officer or employee

of the contractor supervising such payment, to the effect that each and every person employed on the work has been paid in full the weekly wages shown on the pay roll covered by the affidavit; that no rebates or deductions from any wages due such employee or employees have been made either directly or indirectly; and that to the best of the knowledge and belief of the affiant no agreement or understanding exists with any person employed on the project pursuant to which any person, directly or indirectly, by force, intimidation, threat, or otherwise, induces or receives any deductions or rebates in any manner whatever from any sum paid or to be paid any person for labor performed in carrying out this contract. At the time upon which the first affidavit with respect to wages paid employees is filed the contractor shall also furnish an affidavit setting forth the name of the officer cr employee who supervises the payment of employees and stating that such officer or employee is in a position to have full knowledge of the facts set forth in the affidavit respecting the payment of wages of employees. event that the contractor is a corporation the second affidavit herein described shall be executed by its president or a vice president; in

ease the contractor is a partnership such affidavit shall be executed by one of the partners. A similar affidavit shall be filed immediately in the event that a change is made in the officer or employee who supervises the payment of employees.

(b) The contractor shall cause appropriate provisions to be inserted in all subcontracts relating to this work to insure fulfillment of the requirements of this article.

ARTICLE 20. Additional security.—Should any surely upon the bond for the performance of this contract become unacceptable to the Government, or if any such surety shall fail to furnish reports as to his financial condition from time to time as requested by the Government, the contractor must promptly furnish such additional security as may be required from time to time to protect the interests of the Government and of persons supplying labor or materials in the prosecution of the work contemplated by the contract.

ARTICLE 21. Definitions.—(a) The term "head of the department" as used herein shall mean the head or any assistant head of the executive department or independent establishment involved, and the term "his duly authorized representative" shall mean any person authorized to act for him

The term "contracting officer" as used herein shall include his duly appointed successor or his authorized representative.

ARTICLE 22. Alterations.—The following changes were made in this contract before it was signed by the parties hereto:

The words "or his duly authorized representative" have been added to Article 9 hereof.

The words "other than the contracting officer" have been deleted from paragraph (a) of Article 21 hereof.

IN WITNESS WHEREOF, the parties hereto have executed this contract as of the day and year first above written:

THE UNITED STATES G. AMERICA, By S. O. HARPER, Acting Chief Engineer, Bureau of Reclamation.

> MARTIN. WUNDERLICH COMPANY, Contractor.

By Martin Wunderlich,

Member of firm.

Jefferson City, Missouri.

Two witnesses:

GEO. P. LEONARD, IRENE BRUNS. [fol. 45]

## VALLECITO DAM

Pine River Project, Colorado

Bids will be considered on the following schedule, but no bids will be considered for only a part of the schedule.

#### SCHEDULE

Item		HEDULE	
No.	. Work or material	Quantity and price	Amount
. 1	Diversion and care of river during construc- tion and unwatering foundations	For the lump sum of fifteen thousand dollars	\$15,600.00
2	Excavation, stripping borrow pits	125,000 cu. yds., at twenty- three cents (\$.23) per cu. yd.	28,750.00
3	Excavation, stripping for embankment	200,000 cu. yds., at twenty cents (\$.20) per cu. yd	40,000.00
4	Excavation, common, and separation of excavation for diversion channel	70,000 cu. yds., at thirty-five cents (\$.35) per cu. yd	24,500.00
	Excavation rock, for diversion channel	500 cu. yds., at two dollars (\$2.00) per cu. yd	1,000.00
6	spillway upstream from station 15+00	three cents (\$.23) per cu.	34,730.90
7	Excavation, common, and separation of excavation for spillway downstream from station 15+00	444,000 cu\yds., at thirty-five cents (\$.35) per cu. yd	155,400,00
8	Exeavation, rock, for spill-	75,000 cu. yds., at sixty cents (\$.60) per cu. yd	45,000.00
9	Excavation, common, and separation of excava-	140,000 cu. yds., at thirty-five cents (\$.35) per cu. yd	49,000.00
10	Exeavation, rock, for out-	3,600 cu, yds., at two dollars (\$2.00) per cu. yd.	7,200.00
11	Excavation, common, and separation of excavation tion for embankment toe drains and cut-off trench	185,000 cu. yds., at thirty-five cents (\$.35) per cu. yd.	64,750.00
12	Excavation, rock, for em- bankment toe drains and cut-off trench	500 cu. yds., at two dollars (\$2.00) per cu. yd	1,000.00

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No.		Quantity and price	Amount
13	Excavation, rock, for con- crete cut-off wall foot- ings	1,000 cu. yds., at five dollars (\$5.00) per cu. yd	\$5,000.00
	Excavation, common, in borrow pits for earth fill in embankment and transportation to em- bankment	3,100,000 cu. yds., at twenty- three cents (\$23) per cu. yd.	713,000.00
15	Excavation, rock, in bor- row pits for embank- ment, except cobble fill,	95,000 cu. yds., at two dollars (\$2.00) per cu. yd	190,000.00
	and transportation to embankment and to spillway and diversion channels	4	
. 16	Excavation, all classes, and separation of ex- cavation in borrow pits for cobble fill and trans- portation to embank- ment	50,000 cu. yds., at thirty-five cents (\$.35) per cu. yd	17,500.00
17	Backfill about structures	45,000 cu. yds., at fifty cents (\$.50) per cu. yd	22,500.00
18	Refill of diversion channel	35,000 cu lyds., at ten cents (3.10) per cubyd.	3,500.00
19	Earth fill in embankment	3,200,000 cu. yds., at five cents (\$.05) per cu. yd.	160,000.00
20	Cobble and sluiced gravel fill at downstream toe of embankment	80,000 cu. yds., at twenty-five cents (\$.25) per cu. yd.	20,000.00
21	Cobble and rock fills on slopes of embankment	275,000 cu. yds., at fifteen cents (\$.15) per cu. yd	41,250.00
22	Riprap on upstream slope of embankment and in inlet channel to spillway	123,000 cu. yds., at twenty cents (\$.20) per cu. yd	24,600.00
23	Dumped riprap in outlets of spillway and diversion channels	3,700 cu. yds., at twenty cents (\$.20) per cu. yd	740.00
24	Constructing 12-inch diameter sewer-pipe drains with uncemented joints, embedded in gravel	2,200 lin. ft., at one dollar (\$1.00) per lin. ft	2,200.00
25	Constructing 8-inch diameter sewer-pipe drains with uncemented joints, embedded in gravel	3,800 lin. ft., at ninety cents (\$.90) per lin. ft	3,420.00

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Item	O CONTRACTOR OF THE CONTRACTOR	Amount
No. Work or material.	Quantity and price	Amount
26 Constructing 6-inch diameter sewer-pipe drains with uncemented joints,	5,100 lin. ft., at eighty cents (\$.80) per lin. ft.	\$4,080.00
embedded in gravel	2 200 lin ft at seventy cents	
27 Constructing 4 inch diameter sewer-pipe drains with uncemented joints,	3,300 lin. ft., at seventy cents (\$.70) per lin. ft	2,310.00
embedded in gravel	70 cu. yds., at twenty dollars	
28 Porous concrete	(\$20.00) per cu. yd	1,400.00
29 Drilling weep holes	120 lin. ft., at two dollars (\$2.00) per lin. ft	240.00
30 Drilling grout holes not more than 25 feet deep	2,200 lin. ft., at one dollar (\$1.00) per lin. ft.	2,200.00
31 Drilling grout holes more than 25 feet and not more than 50 feet deep	5,500 lin. ft., at one dollar fifty cents (\$1.50) per lin. ft.	8.250.00
32 Installing grout pipe and	3,800 pounds, at thirty cents	
fittings	(\$.30) per pound.	1,140.00
33 Pressure grouting	7,700 cu. ft., at one dollar (\$1.00) per cu. ft.	7,700.00
34 Drilling holes for anchor	· 3,700 lin. ft., at one dollar	0 700 00
bars and grouting bars in place	(\$1.00) per lin. ft	3,700.00
35 Concrete in embankment cut-off walls	1,500 cu. yds., at thirteen dol- lars (\$13.00) per cu. yd	19,500.00
36 Concrete in outlet-works	1.200 cu. vds., at twenty dol-	24 000 00
trash - rack structure, transition, gate chamber,	lars (\$20.00) per cu. yd	24,000.00
and shaft		
37 Concrete in outlet conduit	2,500 cu. yds., at fourteen dollars (\$14.00) per cu. yd.	35,000.00
38 Concrete in floors of spill- way and outlet-works channels	7,700 cu. yds., at ten dollars (\$10.00) per cu. yd	77,000.00
39 Concrete in spillway and	9,600 cu. yds., at fifteen dol-	*** *** ***
outlet-works channels, ex- cept floors	lars (\$15.00) per cu. yd	A. 2
40 Concrete in control house	60 cu. yds., at forty dollars (\$40.00) per cu. yd	2,400.00
41 Concrete in parapet and curb walls	1,700 cu. yds., at fifteen dol- lars (\$15.00) per cu. yd.	\$25,500 00

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Vo.		Quantity and price	Amoun
2	Placing reinforcement bars	. 2,770,000 pounds, at one and	
		seven tenths cents (\$.017)	· · · · · · · · · · · · · · · · · · ·
		per pound	\$47,090.00
3	Installing metal, sealing	1,000 lin. ft., at fifty cents	
	strips	(\$.50) per hn; ft	500.00
4	Installing elastic filler ma-	2,000 sq. ft., at fifty cents	****
	terial in expansion joints	(\$.50) per sq. ft	1,000.00
5	Special finishing of concrete	2,300 sq. yds., at one dollar	
0	surfaces	(\$1.00) per sq. yd	2,300.00
6	Construction of control	For the lump sum of one	
-	house except concrete	thousand dollars	1,000.0
7	Construction of log-cub	For the lump sum of sixteen	
0	drop in diversion chan.	thousand dollars	16,000.00
8	Installing trash-rack metal-	55,000 pounds, at two cents	00 00
9	work	(\$.02) per pound	1;100.00
3	Installing high-pressure hy-	173,000 pounds, at three cents	100 00
	draulically operated slide		5,190.00
	gates and metal conduit		
0	linings	10,000	
0	Installing control apparatus	10,000 pounds, at five cents	F00 00
	for high-pressure slide	(\$.05) per pound	500.00
i	gates	200,000	1
	Installing radial gates and	250,000 pounds, at three cents	7 500 O
	automatic-operating me-	. (\$.03) per pound	. 7,300.00
2	chanisms Placing bituminous material	60 000 namely at an and and	
-		60,000 pounds, at one and one-	900.00
3	in float drums	half cents (\$.015) per pound.	300.00
.,	Installing radial-gate hoists	10,500 pounds, at ten cents (\$.10) per pound.	. 1,400.00
1	Installing metal spiral stair-	14,000 pounds, at ten cents	1,400.00
	way.		1,400:00
5	Installing pipe handrails	(\$.10) per pound	
4	Instanting pipe nationals.	(\$.08) per pound	560.00
6	Installing miscellaneous	12,000 pounds, at five cents	300.th
u	metalwork	(\$.05) per pound	600:00
7	Installing electrical metal	600 lin. it., at twenty cents	000.00
	conduit 114 inches or less	(\$.20) per lin. ft.	120.00
	in diameter	(\$.20) Der int. 16.,	, 120.00
8	Installing electrical con-	220 pounds, at fifty cents	t die .
	ductors	(\$.50) per pound	100:00
9	Installing electrical appa-	2,500 pounds, at twenty cents	100.00
9	ratus	(\$.20) per pound	500.00
- 6	ratus .	(o.20) per pound	000.00

## SPECIFICATIONS GENERAL CONDITIONS

4. Rights-of-way.—The site for the installation of machinery or the right-of-way for the works to be constructed under this contract and for necessary borrow pits, channels, spoil banks, ditches,

roads, etc., will be provided by the Government.

5. Quantities and unit prices.—The quantities noted in the schedule are approximations for comparing bids, and no claim shall be made against the Government for excess or deficiency therein, actual or relative. Payment at the prices agreed upon will be in full for the completed work and will cover materials, supplies, labor, tools, machinery, and all other expenditures incident to satisfactory compliance with the contract, unless otherwise specifically provided.

6. Staking out work.—The work to be done will be staked out for the contractor who shall, without cost to the Government, provide such material and give such assistance as may be required by

the contracting officer.

7. Bench marks and survey stakes.—Bench marks and survey stakes shall be preserved by the contractor, and in case of their destruction or removal by him or his employees, they will be replaced by the contracting officer at the contractor's expense, and his sureties shall be liable therefor.

8. Data to be furnished by contractor.—The contracting officer, through his authorized agents, shall have access to all pay rolls, records of personnel, invoices of materials, and any and all other data relevant to the performance of the contract or necessary to determine its cost, and the contractor shall furnish at the end of each month an itemized statement in a form satisfactory to the contracting officer of the cost of all work under the contract.

 Sanitation.—The contracting officer may establish sanitary and police rules and regulations for all forces employed under

50 this contract, and if the contractor fails to enforce these rules, the contracting officer may enforce them at the ex-

pense of the contractor.

10. Extras.—The contractor shall, when ordered in writing by the contracting officer, perform extra work and furnish extra material, not covered by the specifications or included in the schedule, but forming an inseparable part of the work contracted for. Extra work and material will ordinarily be paid for at a lump-sum or unit price agreed upon by the contractor and the contracting officer and stated in the order. Whenever in the judgment of the contracting officer it is impracticable because of the nature of the

work or for any other reason to fix the price in the order, the extra work and material shall be paid for at actual necessary cost as determined by the contracting officer, plus 10 percent for superintendence, general expense, and profit. The actual necessary cost will include all expenditures for material, labor (including compensation insurance), and supplies furnished by the contractor, and a reasonable allowance for the use of his plant and equipment, where required, to be agreed upon in writing before the work is begun, but will in no case include any allowance for office expenses, general superintendence, or other general expenses.

- 14. Protests.—If the contractor considers any work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the contracting officer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or decision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within 10 days after date of receipt of the written instructions or decision, he shall file a written protest with the contracting officer, stating clearly and in detail the basis of his objections. Except for such protests or
- objections as are made of record in the manner herein specified and with the time limit stated, the records, rulings, instructions, or decisions of the contracting officer shall be final and conclusive. Instructions and/or decisions of the contracting officer contained in letters transmitting drawings to the contractor shall be considered as written instructions or decisions subject to protest or objections as herein provided.
- 16. Payments.—In preparing estimates for partial payments the material delivered on the site and preparatory work done will not be taken into consideration.

### SPECIAL CONDITIONS.

- 17. The requirement.—It is required that there be constructed and completed, in accordance with these specifications and the drawings listed in paragraph 21 hereof, the Vallecito Dam, Pine River project, Colorado. The work is located on the Pine River about 23 miles north of Bayfield, Colorado, as shown on the location map.
- 19. Forty-hour week.—Except in executive, administrative, and supervisory positions, so far as practicable and feasible, in the judgment of the contracting officer, no individual directly employed.

on the project shall be permitted to work more than forty hours in any one week.

- 20. Description.—The principal features involved in the construction of the Vallecito Dam are the dam across the Pine River, a reinforced-concrete outlet conduit constructed in open cut at the right abutment, and a concrete-line open-channel spillway at the same abutment. The dam will have a crest length of approximately 4,000 feet and a maximum height of about 125 feet above the bed of the stream. The dam will consist of a moistened and rolled em-
- bankment of clay, sand, and gravel with a 3-foot blanket of rock riprap on the upstream face and a cobble and rock fill of increasing thickness from crest to toe on the downstream The outlet conduit will have a length of approximately 611 feet and will be provided with a reinforced-concrete trash rack at the inlet end. The flow of water through the conduit will be controlled by four 5-foot by 5-foot hydraulically operated slide gates installed in a gate chamber located about 38 feet upstream from the axis of the dam. Two of the gates will be used to regulate the flow of water and two for emergency purposes. A metal spiral stairway installed in a vertical concrete shaft will provide access to the gate chamber from a control house on the crest of the dam. The control mechanism for the slide gates will be installed in the control house, and the control piping will be carried down the stairway shaft to the gates. The outlet conduit will discharge into a concrete-lined open channel which will discharge into the spillway channel. The spillway will be a concrete-lined open channel approximately 2,330 feet long, including the stilling basin at the downstream end.. The discharge over the spillway will be controlled by three radial gates, each 37 feet long and 19 feet high, installed on the erest of the spillway.
- 21. Drawings.—The following drawings are made a part of these specifications:
  - 1. (28646) 191-D-41-Location map.
  - 2: (28647) 191-D-42-Hydrographs of Pine River.
  - 3. (28648) 191-D-43—Map of reservoir area.
  - 4. (28649) 191-D-44 -Location and log of drill holes and test pits.
  - 5. (28650) 191-D-45—Borrow pit and test-hole data-
  - 6. (28651) 191-D-46—General plan and sections.
  - 7. (28652) 191-D-47—River diversion—Plan, profiles, and sections.
  - 8. (28653) 191-D-48—River diversion—Log drop details. 9. (28654) 191-D-49—Spillway—Plan and sections.
  - 53 10. (28655) 191-D-51 Spillway Gate structure details.

- 11. (28656) 191-D-51-Spillway-Stilling basin details.
- 12. (29334) 191-D-52—Spillway—37-foot by 19-foot automatic radial gate—Installation.
- 13. (29335) 191-D-53—Outlet works Conduit alinement, profile and sections.
- 14. (29336) 191-D-54—Outlet works—Gate chamber and control house.
- (29337) 191-D-55—Outlet works—Inlet and outlet structures.
- (28218) 40-D-2323—5-foot by 5-foot high-pressure gate
   Assembly with hydraulic hoist.
- 17. (29338) 191-D-57-Electrical installation (sheet 1 of 2).
- 18. (29339) 191-D-58-Electrical installation (sheet 2 of 2).
- 19. (29340) 191-D-59-Construction program.

The drawings which form a part of these specifications show the work as definitely and in as much detail as is possible at the present stage of the development of the design. The attached drawings will be supplemented or superseded by such additional and detail drawings as may be necessary or desirable as the work progresses. Such drawings, which will show details not shown on the attached drawings, for all features of the work and for the installation of machinery or equipment not yet purchased, will not be considered to involve changes or extras within the meaning of articles 3 and 5 of the contract and paragraph 10 of these specifications. The contractor will be required to perform the work on these features, and in accordance with the additional and detail drawings mentioned above, at the applicable unit prices bid in the schedule for such work or work of a similar nature, as determined by the contracting officer. The contractor will be furnished such additional

54 copies of the specifications and drawings as may be required for carrying out the work. Contact prints of the original drawings from which the attached reductions were made will be furnished to the contractor for construction purposes, upon request,

22. Commencement, prosecution, and completion of work.—
The contractor shall begin work within thirty (30) calendar days after date of receipt of notice to proceed, and shall complete all of the work within thirteen hundred and fifty (1350) calendar days from the date of receipt of such notice. The contractor shall at all times during the continuance of the contract prosecute the work with such forces and equipment as in the judgment of the contracting officer are sufficient to complete it within the specified period of time.

24. Construction program.—The contractor's construction operations shall be subject at all times to the approval of the contracting

The capacity of the contractor's construction plant, sequence of operations, and methods of operation shall be such as to insure the completion of the work within the period of time specified. A tentative construction program has been prepared by the Government and is shown on the drawings, which program, if followed, will result in the completion of the work within the period of time specified in paragraph 22. The construction program is based on an assumption that notice to proceed will be received by the contractor on April 1, 1938. The construction program shown on the drawings is tentative only, and the Government assumes no responsibility for any use that bidders or the contractor may make thereof or for any deductions or conclusions that may be made from the program. The tentative construction program is shown on the drawings solely to assist bidders and the contractor in preparing their own construction programs. None of the statements in this paragraph nor anything on the tentative construction program shall

relieve the contractor from the obligation to commence, prosecute, and complete the work as provided in paragraph

22. Within 60 calendar days after date of receipt of notice to proceed, the contractor shall furnish the contracting officer a complete construction program showing in detail his proposed program of operations. Revised construction programs shall be submitted by the contractor at intervals of not more than six months, and in addition thereto, the contractor shall immediately advise the contracting officer of any proposed changes in his construction

program.

25. Materials furnished by the Government.-The Government will furnish cement for use in concrete, mortar, and grout; admixtures, if required, for use in concrete; reinforcement bars; anchor bars, rods, and bolts, including einch anchors; metal pipe, fittings, and valves for permanent installation; grouting units for contraction joint grouting; pipe and fittings for handrails; slip-joint metal pipe for reservoir intake to float wells; concrete or clay sewer pipe for drains; metal drain inlets; cast-iron soil pipe and fittings; trash-rack bars and castings; stop-log guides; gates, gate hoists, gate hangers, and operating and control mechanisms; conduit lining castings for outlet works; metal bearing plates for concrete bridge over spillway; structural steel angles for protection at edges of dentated sills; floor plates and gratings; hatchway, sump, and manhole frames and covers; metal spiral stairway; metal ladders and ladder rungs; metal sealing strips; welding rods for field erection and installation of metalwork; heavy burlap for use over drains; materials for coating and filling joints; motor-driven ventilating blower; sheet-metal air duct; crimped metal sleeve for air shaft; lumber for the roof of the control house, but not lumber for forms or for other temporary purposes; bolts, washers, screws, and spikes

and nails twentypenny or larger in size to be used in the completed structure; material for drift pins for the log-crib drop; all doors, windows, ventilators, louvers, hardware, and roofing materials for

the control house; gasoline-engine-driven generator; gasoline supply tank and piping; paint and coating materials; electrical conduits, fittings, and conductors; and also all other materials not specifically mentioned in this paragraph or in paragraph 26 that will become a part of the completed construction work. All materials furnished by the Government will be delivered to the contractor f.o.b. cars at Ignacio, Colorado. The contractor shall haul all materials from the point of delivery to the work; shall provide suitable warehouses or other means of protection satisfactory to the contracting officer for such of the materials as in the opinion of the contracting officer, require storage or protection; and will be charged for any materials lost or damaged after delivery, except as otherwise specifically provided, the same amounts that the materials cost the Government at the point of delivery to the contractor. The contractor shall be responsible for the prompt unloading of materials delivered on cars and for proper care of the materials, and will be held liable for any demurrage charges incurred due to failure to unload cars promptly. The contractor shall report to the contracting officer, in writing, within 24 hours after unloading any shortage in or damage to materials when delivered. The cost of unleading, hauling, storing, and caring for all materials furnished by the Government shall be included in the prices bid for the work in which the materials are to be used. The cost of handling and installing minor miscellaneous items of timber, metal, or other work, for which specific prices are not provided in the schedule, shall be included in the prices bid for work to which they are appurtenant, as determined by the contracting officer. The contractor shall return to the Government, at the dam site, as directed by the contracting officer, all unused materials, and will be charged for any materials not used and not returned the same amounts that the materials cost the Government at the point of delivery to the contractor. The contractor shall return to the Government at Ignacio, Colorado, as directed by the

contracting officer, all returnable oil barrels, spools, reels, and other returnable shipping accessories, and will be charged for any such accessories not returned, or damaged to such an extent that the are not returnable, the same amounts that the

Government is required to pay for such accessories.

26. Materials to be furnished by the contractor.—The contractor will be required to furnish all sand and broken rock or gravel for concrete; all sand for mortar and grout; all gravel for embedding drain pipes; all backfill materials; all form materials, including oil for oiling forms; all logs required for log cribs; all lumber for

lining the log-crib drop; cable, anchor bolts, strap iron, belting, and all other material, except material for drift pins, for the log-crib drop; all boulders, cobbles, rock fragments, gravel, and rock spalls for .ock fills in log cribs; all spikes and nails less than twentypenny in size to be used in structures; all wire, wire ties, or other appliances used for holding forms and for securing reinforcement bars; metal or other temporary supports, if used, for reinforcement bars, pipe, and other metalwork; all water used for mixing; cleaning, and curing concrete, for grouting operations, and for moistening embankment and backfill materials; lead and tarred oakum for cast-iron soil pipe joints; oakum or other suitable materials for calking grout and drain pipes; joint compound for highpressure piping; all insulating tape and compounds, solder, and flux for electrical installations; and also all other materials not a part of the completed construction work required for the completion of the contract. The contractor shall haul all of these materials as well as all materials delivered to the contractor by the Government. The cost of hauling, storing, and handling all of the materials described above and of furnishing all of the materials required to be furnished by the contractor shall be included in the prices bid in the schedule for the work for which the materials are required.

28. Records of test pits and borings.—The drawings included in these specifications show the available records of test pits dug and borings made at or near the dam site. The Government does not guarantee any interpretation of these records or the correctness of any information shown on the drawings relative to geological conditions. Bidders and the contractor must assume all responsibility for deductions and conclusions as to the nature of the rock and other materials to be excavated, the difficulties of making and maintaining the required excavations and of doing other work affected by the geology of the site of the work, and for the final preparation of the foundations for the dam and other structures.

29. River discharge records.—Hydrographs of the Pine River at gaging stations 2 miles and 20 miles below the dam site are shown on the drawings. The hydrographs are included in the drawings for the convenience of bidders and the contractor. The Government does not guarantee the reliability or accuracy of any of the hydrographs and assumes no responsibility for any deductions, conclusions, or interpretations which may be made from them.

30. Right to change tocation and plans. When additional information regarding foundation or other conditions becomes available as a result of the excavation work, further testing, or otherwise, it may be found desirable to change the location, alinement, dimensions, or design of the dam or appurtenant works to conform to

such conditions. The Government reserves the right to make such reasonable changes as, in the opinion of the contracting officer, may be considered necessary or desirable, and the contractor shall be entitled to no extra compensation because of such changes, except that any increase in the amount of excavation, concrete, or other required work, for which items are provided in the schedule, will be paid for at the unit prices bid therefor in the schedule. The contractor's plant shall be laid out and his operations shall be

conducted so as to accommodate any reasonable change in 59 the location and design of the dam and appurtenant works, or any part thereof, without additional cost to the Government.

31. Lines and grades.—The contractor shall provide such drill holes, forms, ladders, spikes, nails, light, and such assistance as may be required by the contracting officer in giving lines and grades. The contracting officer's marks shall be carefully preserved by the contractor until they have served their purpose. Work shall be suspended at such points and for such reasonable time as the contracting officer may require to transfer lines and to mark points for line and grade. No additional compensation will be paid to the contractor for required assistance in setting lines and grades or for loss of time on account of such necessary suspension of work or otherwise on account of the requirements of this paragraph.

34. Roads.—The approximate locations of existing roads in the vicinity of the work are shown on the drawings. Access to the work from existing roads shall be provided by the contractor at his own . The Government assumes no responsibility for the condition or maintenance of any road or structure thereon that may be used by the contractor in performing the work under these specifications or in traveling to and from the site of the work. No payment will be made to the contractor by the Government for any work done in constructing, improving, repairing, or maintaining any road, highway, or structure thereon for use in the performance of the work under these specifications. Roads subject to interference by the work shall be kept open. The contractor shall provide, erect, and maintain all necessary barricades, suitable and sufficient red lights, danger signals and signs, and shall take all necessary precautions for the protection of the work and the safety of the public. Highways and roads closed to traffic shall be protected by .

effective barricades on which shall be placed acceptable 60 warning and detour signs. All barricades and obstructions shall be illuminated at night, and all lights shall be kept burning from sunset until sunrise.

35. Use of construction facilities.—It is possible that work at or

in the vicinity of the Vallecito dam site will be performed by the Government or by other contractors during the period covered by the contract under these specifications. The contractor shall permit full use, without charge therefor, by the Government and/or other contractors of roads, bridges, foot bridges, lighting, and such other facilities constructed by the contractor for use in the performance of the contract under these specifications, and usable jointly by the contractor, the Government, and other contractors, as are available for such use without direct additional cost to the contractor.

36. Timber for use of contractor.—Any available timber within the area to be flooded by the reservoir downstream from the clearing line shown on drawing no. 191-D-45 may be cut and used by the contractor for construction purposes or for fuel. Cutting shall be done as close to the ground as practicable as determined by the contracting officer: Provided, That a maximum height of stumps of more than two feet will not be permitted. All branches and other unused parts of trees and brush cut by the contractor shall be burned or otherwise disposed of as provided in paragraph 40.

37. Sand and gravel deposits.—Sand and broken rock or gravel for concrete and sand for mortar shall be furnished by the contractor and may be obtained from the natural deposits shown on the drawings or from any other source approved by the contracting officer. Preliminary investigations based on test pits dug at a limited number of points in gravel deposits "A" and "B" and sand deposit "C", shown on the drawings, inducte that the sand in deposit "C" has a favorable grading but that the sand in deposits "A" and "B" is too coarse and will require the addition of

fine blending sand. The coarse aggregates in deposits "A" and "B" apparently contain an excess of soft particles, and some method of removing these particles may be necessary. However, the Government assumes no responsibility for the accuracy of the above statements relative to the quality and grading of the materials in the deposits or for any conclusions which may be drawn therefrom relative to the amount of work required to produce aggregates meeting the requirements of these specifications, deposits to be used by the contractor are located at points approved by the contracting officer on the property of the Government or on withdrawn public land in the vicinity of the work, no charge will be made to the contractor for materials taken from such deposits and used in the work covered by these specifications. Such deposits shall be located and operated so as not to mar the usefulness or appearance of any part of the work or of any other property of the Government and shall be operated so as to reduce as little as practicable their future usefulness or value. Any royalties or other charges required to be paid for materials taken from deposits located

on private land or secured from other sources shall be paid by the contractor. The approval of deposits by the contracting officer shall not be construed as constituting the approval of all materials taken from the deposits, and the contractor will be held responsible for the specified quality of all such materials used in the work. To utilize the greatest practicable yield of suitable materials in the portions of the deposits being worked, the contractor may crush oversize material and any excess material of the gravel sizes to be furnished, until the full amount of the various sizes of gravel has been delivered: *Provided*, That, insofar as practicable, the amount of crushed material in any size of gravel shall not exceed that required to make up the deficiency in that particular size. *Provided further*, That the crushed material shall be uniformly blended

with the uncrushed gravel. The crushing operations shall be subject at all times to the approval of the contracting officer.

The contractor shall be entitled to no compensation for material wasted from the gravel deposits, including excess material of any of the sizes into which the aggregate is required to be separated. by the contractor and materials which have been discarded by reason of being below the minimum or above the maximum sizes specified for use. The contractor shall carefully clear the sites. of the deposits, or as much thereof as may be required, of all trees, roots, brush, sed, soil, unsuitable sand and gravel, and other objectionable matter and shall develop and maintain the deposits in a condition suitable for the excavation and removal of the required materials. The sand and broken rock or gravel shall be washed unless written authority is given by the contracting officer to use unwashed sand and broken rock or gravel. The screening and washing of the aggregates shall be done at the deposits or at a point, approved, in writing, by the contracting officer: Provided, That the location, time, sequence, and method of the washing operations shall be such as to insure that each of the various sizes of aggregate has a reasonably uniform and stable moisture content. when delivered to the mixing plant. The water used for washing the aggregates shall be reasonably clean and shall be free from objectionable quantities of silt, organic matter, alkali, salts, and other impurities. If the aggregates are to be obtained from deposits other than those shown on the drawings, the contractor shall submit representative samples of the aggregates proposed for use in the work at least three months before aggregates are required for use. The samples shall be furnished in amounts directed by the contracting officer. The cost of all work required by this paragraph and all cost of aggregates secured elsewhere than from deposits located on Government land shall be included in the unit prices bid in the schedule for the items of work in which the materials obtained are used, which unit prices shall also include all expenses of the contractor in crushing, screening, washing, blending; classifying, hauling, storing, mixing, and other necessary operations on the materials.

38. Storage of water prior to completion of dam.—The Government reserves the right to commence storing water in the reservoir at any time after the placing of concrete in the spillway structure and the placing of materials in the dam are completed to elevation 7646, and thereafter to maintain the water surface in the reservoir at any elevation not higher than 20 feet below the maximum possible elevation as fixed by the low controlling point of the then completed construction work. The installation of outlet gates and other operations of the contractor shall be arranged and timed; subject to the approval of the contracting officer, to permit the storage of water as soon as the dam and spillway have been constructed to the required elevation. Unless otherwise approved in writing by the contracting officer all portions of the embankment shall be completed to elevation 7646 at the same time and at that time the spillway shall also be completed to elevation 7646, and no operation of the contractor shall be permitted to interfere with or prevent beginning storage of water or the operation of the outlet works incident there that time. No payment for any part of the work, in addition to that provided at the prices bid in the schedule, will be made to the contractor on account of the storage or release of water as provided in this paragraph.

39. Diversion and care of river during construction and unwatering foundations. The contractor shall construct and maintain all necessary cofferdams, channels, flumes, and/or other temporary diversion and protective works; shall furnish all materials required therefor; except the metalwork and cement for the log-crib drop as provided in paragraph 25, and shall furnish, install, maintain, and operate all necessary pumping and other equipment for unwatering the various parts of the work and for maintaining the foundations,

as required for constructing each part of the work. The plan for the diversion of the river is shown on the drawings, and the contractor will not be permitted to deviate from this general plan or to construct diversion works of less capacity or of construction inferior to that shown on the drawings. The contractor will be paid under the appropriate items of the schedule for excavating and refilling the diversion channel, constructing the log-crib drop, and placing the appropriate items of the responsible for the adequacy and safety of the river diversion and shall, at his own expense, maintain the diversion channel and the log-crib drop, and the riprap in the diversion channel in a manner and in condition satisfactory to the contracting officer until they have served their

purpose. Should the contractor fail to promptly do any work or furnish any material necessary to maintain the diversion works in a satisfactory condition as determined by the contracting officer the Government will do such work and furnish any material required therefor and charge the cost thereof to the contractor. Nothing contained in this paragraph shall prevent the contractorfrom constructing, at his own expense, such additional capacity of the diversion works and channel or more adequate, substantial, or permanent construction of log-cribs as he may consider necessary, . nor shall it be construed to relieve the contractor from sole responsibility for the river diversion. River discharge curves and diversion channel and outlet works capacity curves are shown on the drawings solely for the purpose of aiding the contractor to time his construction operations to prepare for such flood storage and/or to bypass such flows as may be necessary. The Government does not guarantee reliability or accuracy of any of these curves and assumes no responsibility for any deductions, conclusions, or interpretations which may be made from them. The contractor shall be responsible for and shall repair at the contractor's expense any damage to the foundations, embankment, or any other part

65 of the work caused for floods, water, or failure of any part of the diversion or protective works. After having served their purpose, all cofferdams and other temporary protective works downstream from the dam shall be removed from the river channel or leveled to give a sightly appearance, so as not to interfere in any way with the operation or usefulness of the reservoir and in a manner satisfactory to the contracting officer. The upstream cofferdam shall be constructed as a part of the permanent dam embankment in accordance with the specifications for constructing such part of the dam, and when no longer needed for protection of the work, the top shall be graded to provide an 11 to 1 slope as shown on the drawings. All cofferdams or other temporary protective works constructed upstream from the dam and not a part of the permanent dam embankment shall be removed to the extent required to prevent obstruction in any degree whatever of the flow of water to the outlet works, and the materials thus removed shall be placed at the bottom of the upstream slope of the dam so as to form a toe blanket. The contractor shall not interrupt or interfere with the natural or required flow of water past the dam for any purpose without the approval of the contracting officer. The cost of furnishing all labor, equipment, and materials for constructing cofferdams, channels, flumes, or other diversion and protective works. removing or leveling such works where required, diverting the river, maintaining the work free from water as required, disposing of materials in the cofferdams, maintaining the diversion channel and log-erib drop, and of all other work required by this paragraph,

contract.

except the excavation and refill in the diversion channel, the construction of the log-crib drop, and placing the riprap in the diversion channel, shall be included in the lump-sum price bid in the schedule for diversion and care of river during construction and unwatering foundations: Provided, That any cofferdam or portion thereof constructed as a part of the permanent dam in accordance with these specifications will be paid for at the unit price per cubic yard bid in the schedule for such part of the dam. No progress payment will be made under the item of the schedule for diversion and care of river during construction and unwatering foundations until the first monthly payment made after the river is diverted through the outlet works and the embankment built throughout its length to elevation 7000, at which time 75 percent of the lump-sum price bid therefor will be paid. The remainder of the lump-sum price will be included in the final payment under the

## EARTHWORK:

40. Clearing and grubbing.—The right-of-way for the work to be performed under these specifications, where, in the judgment of the contracting officer, clearing is necessary, shall be cleared of all trees. brush, rubbish, and other objectionable matter, and the cleared materials shall be burned or otherwise disposed of as approved by the contracting officer. Existing improvements on the right-of-way to be cleared will be removed or otherwise disposed of by the Government. The contractor shall also cut all trees and all brush and stumps more than two feet high within the reservoir site and downstream from the clearing line shown on drawing no. 191-D-45. and all material of a combustible nature, including standing timber. dead timber, logs, snags, driftwood, debris, and all other combustible materials, shall be piled and burned or otherwise disposed of as provided in this paragraph or as directed by the contracting officer. No trees shall be cut outside of the areas designated by the contracting officer and all trees designated by the contracting officer downstream from the dam site shall be carefully protected from damage by the contractor's construction operations. Cutting on areas outside of the surface areas of required excavation and areas on which embankments are to be placed shall be done as close to the ground as practicable, and stumps more than 12 inches in height will not be permitted. Where directed by the contracting officer, the ground surface under all embankments and the surface of all excavation that is to be used for embankments or backfill shall be cleared of all stumps, roots, and vegetable matter of every kind. The stumps shall be pulled or otherwise removed, the roots shall be grubbed, and the stumps and roots shall be burned with other combustible material removed. All materials to be burned shall be neatly piled, and when in suitable condition

shall be completely burned. Piling for burning shall be done in such manner and such locations as to cause the least fire risk. material shall be piled and burned above the high-water line of the reservoir. The reservoir site is within the limits of the San Juan National Forest, and all burning shall be done at such times and under such regulations as the proper Federal Forest Service officials shall direct. All burning shall be so thorough that the materials are reduced to ashes. No logs, branches, or charred pieces shall be permitted to remain. The contractor shall at all times take special precautions to prevent fire from spreading to the area outside the limits of the reservoir site. The contractor shall have available at all times a suitable supply of axes, saws, mattocks, shovels, and other necessary equipment and supplies for use in preventing and suppressing fires. The cost of all work described in this paragraph shall be included in the unit prices bid for other work in the schedule, and no additional allowance will be made to the contractor on account of any amount of such clearing and grubbing which may be required.

41. Classification of excavation.—Except as otherwise provided in these specifications, all materials moved in required excavations for the dam and appurtenant works will be measured in excavation only, to the neat lines shown on the drawings or prescribed by the contracting officer, and will be classified for payment as follows:

Rock excavation.—All solid rock in place which cannot be removed until loosened by blasting, barring, or wedging and all boulders or detached pieces of solid rock more than one cubic yard in volume. Solid rock under this class, as distinguished from soft or disintegrated rock under common excavation, which also requires blasting before removal, is defined as sound rock of such hardness and texture that it cannot be loosened or broken down by hand drifting picks. No material, except boulders or detached pieces of solid rock, will be classified as rock excavation, which is not actually loosened by blasting before removal, unless blasting is prohibited, and barring, wedging, or similar methods are prescribed by written order of the contracting officer.

Common excavation.—All material other than rock excavation; including, but not restricted to earth, gravel, and also such hard and compact material as hardpan, cemented gravel, and soft or disintegrated rock, which cannot be removed efficiently by team-drawn scrapers or excavating machinery until loosened by blasting; also all boulders or detached pieces of solid rock not exceeding one cubic yard in volume.

No additional allowance above the unit prices bid in the schedule for excavation of materials will be made on account of any of the materials being wet or frozen. It is desired that the contractor or the contractor's representative be present during measurement

of materials excavated. On written request of the contractor, made within 10 days after the receipt of any monthly estimate, a statement of the quantities and classifications between successive stations, or in otherwise designated locations, included in said estimate will be furnished to the contractor within 10 days after the receipt of such request. The statement will be considered as satisfactory to the contractor unless specific written objections thereto with reasons therefor are filed with the contracting officer within 10 days after receipt of said statement by the contractor or the contractor's representative on the work. Failure to file such written objections with reasons therefor within said 10 days shall be considered a waiver of all claims based on alleged erroneous estimates of

quantities or classification of materials for the work covered

by such statement.

42. Blasting.—Blasting will be permitted only when proper precautions are taken for the protection of persons, the work, and private property, and any damage done to the work or private property
by blasting shall be repaired by the contractor at the contractor's
expense. Caps or other exploders or fuses shall in no case be stored,
transported, or kept in the same place in which dynamite or other
explosives are stored, transported, or kept. The location and design of powder magazines, methods of transporting explosives, and,
in general, the precautions taken to prevent accidents shall be subject to the approval of the contracting officer, but the contractor
shall be liable for all injuries to or deaths of persons or damage to

property caused by blasts or explosives.

43. Open-cut excavation, general.—Except as otherwise provided in these specifications for definite features of open-cut excavation or as otherwise shown on the drawings, open-cut excavation will be measured for payment to slopes of 1 to 1 for common excavation and 1/4 to 1 for rock excavation, and, in the case of excavation for structures, to lateral dimensions of one foot outside of the foundations of the structures: Provided, That where the character of the material cut into is such that it can be trimmed to the required lines of the concrete structure and the concrete placed directly against the sides of the excavation, measurement for payment will be made only for the excavation within the neat lines of the structure: Provided further, That for any required excavation where, in the opinion of the contracting officer, the conditions warrant, the excavation will be. measured for payment to the most practicable dimensions and lines as staked out or otherwise established by the contracting officer: Provided, further, That for trenches for pipe drains, except toe

drains for the dam embankment, measurement for payment will be made only to the neat lines required to provide for the thickness of gravel fill around the drain pipes as shown on the drawings or as directed by the contracting officer. Where not to be covered with concrete, excavations shall be made to the

full dimensions required and shall be finished to the prescribed lines and grades in a workmanlike manner, except that sharp points of undisturbed ledge rock will be permitted to extend within the prescribed lines not more than six inches. The contractor shall prepare the foundations at structure sites in a manner suitable for forming foundations for the concrete structures. The bottom and side slopes of common excavation upon or against which concrete is to be placed shall be accurately finished by hand to the dimensions shown on the drawings or prescribed by the contracting officer, and the surfaces so prepared shall be moistened with water and tamped or rolled with suitable tools or equipment for the purpose of thoroughly compacting them and forming firm foundations upon or against which to place the concrete structures. If at any point in common excavation, material is excavated beyond the neat lines required to receive the structure, the overexcavation shall be filled with selected materials, in layers not more than six inchs thick, moistened and thoroughly compacted by tamping or rolling in a manner satisfactory to the contracting officer. If at any point in common excavation the natural foundation material is disturbed or loosened during the excavation process or otherwise, it shall be consolidated in a manner satisfactory to the contracting officer, or, where directed by the contracting officer, it shall be removed and replaced with selected material compacted to the satisfaction of the contracting officer. Where concrete is to be placed upon or against rock, the excavation shall be sufficient to provide for the minimum thickness of concrete at all points, and the prescribed average thickness shall be exceeded as little as pos-Measurement of such excavation for payment will be limited to the excavation required for the prescribed aver-71 age thickness of the concrete for which measurement for: payment will be made as provided in these specifications. Any and all excess excevation or overexcavation performed by the contractor for any purpose or reason, except as may be ordered in writing by the contracting officer, and whether or not due to the fault of the contractor, shall be at the expense of the contractor. No blasting that might injure the work will be permitted, and any damage done to the work by blasting, including the shattering of the material beyond the required excavation lines, shall be repaired by and at the expense of the contractor and in a manner satisfactory to the contracting officer. All cavities in rock excavations upon or against which concrete is to be placed, caused by careless: excavation, as determined by the contracting officer, or by removal; as directed by the contracting officer, of rock or other foundation materials needlessly damaged by blasting or other operations of the contractor, shall be solidly filled with concrete entirely at the expense of the contractor, including the cost of all materials re-

quired therefor. Insofar as practicable, as determined by the con-

tracting officer, all suitable materials from required excavations shall be used in the embankment or in structure backfill; Provided, That all suitable materials from common excavation for the diversion channel, downstream portion of the spillway, outlet works, cut-off trench, toe drains, and from the cobble borrow pits shall be separated into material 2½ inches or more in diameter and material less than 2½ inches in diameter as provided in paragraphs 45, 46, 47, 48, and 52: The contractor shall be entitled to no additional compensation above the unit prices bid in the schedule for excavation, embankment, and backfill, due to the necessity for renandling any materials which, on account of orders of the contracting officer or for any other reason, are laid aside in temporary storage piles prior to transporting to embankment or backfill. Except as otherwise provided in paragraph 46, the unit prices

bid in the schedule for excavation shall include all costs in connection with separating the materials into sizes, where required, and the temporary and permanent disposal or wasting of the materials excavated: Provided, That all materials actually placed in the embankment or in structure backfill will again be included for payment under appropriate items of the schedule for embankment or backfill. Except as otherwise provided in paragraph 39 for diversion and care of river during construction and unwatering foundations, the unit prices bid in the schedule for excavation shall include the cost of all labor and materials for cofferdams and other temporary construction and of all pumping, bailing, draining, and all other work necessary to maintain the excavation in good order during construction and of

removing such temporary construction where required.

44. Stripping for embankment.—The entire area to be occupied by the dam, or such portions thereof as may be directed by the contracting offi-er, including the areas over the temporary diversion channel, over the outlet conduit, and over the toe drain and cut-off trenches, shall be stripped or excavated to a sufficient depth to remove all materials not suitable for the foundation, as determined by the contracting officer, and only to the lines and grades established by the contracting officer. The unsuitable materials to be removed shall include top soil, all rubbish, vegetable matter of every kind, roots, and all other perishable or objectionable materials which might interfere with the bondings of the embankment with the foundation or the proper compacting of the materials in the embankment or which may be otherwise objectionable. stripped materials shall be disposed of as provided in paragraph 53. Measurement, for payment, of stripping for embankment willbe made in excavation only and to the neat lines as staked out or otherwise established by the contracting officer. Payment for "Excavation, stripping for embankment" will be made at the unit price per cubic yard bid therefor in the schedule, which unit price

shall include the cost of all work provided for in this paragraph.

- 45. Excavation for diversion channel.—The items of the 73 schedule for excavation for diversion channel cover all excavation required for the construction of the diversion channel to the dimensions shown on the drawings, including all excavation required for the construction of the log-crib drop at the downstream end of the channel to the dimensions shown on the drawings. Except as otherwise provided in paragraph 39 for construction of the diversion channel to larger dimensions at the expense of the contractor, all excavation shall be made to the lines, grades, and dimensions, shown on the drawings and in accordance with the provisions of paragraph 43. The contractor shall separate the suitable material from common excavation into cobbles 21/2 inches or more in diameter, which shall be placed in the cobble-fill portion of the embankment, and material less than 21/2 inches in diameter, which shall be placed in the earth-fill portion of the embankment. Measurement, for payment of excavation for diversion channel will be made only to the lines shown on the drawing below the level of the embankment foundation after stripping, and payment fer such excavation will be made at the unit prices per cubic yard bid in the schedule for excavation for diversion channel.
- 46. Excavation for spillway.—The items of the schedule for excavation for spillway include all required excavation for the spillway, including approach and outlet channels, stilling basin, wing walls, retaining walls, cut-offs, buttresses, drains, and all other parts of the structure and also includes the excavation for the drain ditch on the west side of the stilling basin at the downstream end of the spillway, and the excavation for the portion of the road at the end of the dam as shown on the drawings. All excavations shall be made to the lines, grades, and dimensions shown on the drawings or established by the contracting officer and in accordance with the provisions of paragraph 43. The contractor shall
- be entitled to no additional allowance above the unit prices bid in the schedule for excavation for spillway by reason of changes in the lines, grades, and slopes of required excavations, though changes in the quantities of excavation will be covered in the estimates. The contractor shall separate the suitable material from common excavation for spillway downstream from station 15+00 including the excavation for the drain ditch on the west side of the stilling basin at the downstream end of the spillway, into cobbles 2½ inches or more in diameter, which shall be placed in the cobble-fill portion of the embankment and material less than 2½ inches in diameter, which shall be placed in the earth-fill portion of the embankment. Common excavation from the spillway upstream from station 15+00 will not be required to be separated into sizes. Payment for the excavation described

in this paragraph will be made at the unit prices bid in the schedule for excavation for spillway.

47. Excavation for outlet works .- The items of the schedule for excavation for outlet works include all required excavation for the outlet works including approach and outlet channels, retaining walls, buttresses, drains, and all other parts of the structure. All excavations shall be made to the lines, grades, and dimensions shown on the drawings or established by the contracting officer, and in accordance with the provisions of paragraph 43. The contractor shall be entitled to no additional allowance above the unit prices bid in the schedule for excavation for outlet works by reason of changes in the lines, grades, and slopes of required excavations. though changes in the quantities of excavation will be covered in the estimates. The contractor shall separate the suitable material from common excavation for outlet works into cobbles 21/2 inches or more in diameter, which shall be placed in the cobble-fill portion of the embankment and material less than 21/2 inches in diameter, which shall be placed in the earth-fill portion of the embankment. Measurement, for payment, of the excavation for the portion of the outlet works under the embankment will be made

only to the lines shown on the drawings or established by
the contracting officer below the level of the embankment
foundation after stripping. Payment for the excavation
described in this paragraph will be made at the unit prices bid in
the schedule for excavation for outlet works.

48. Excavation for embankment toe drains and cut-off trench .-A cut-off trench with sloping sides under the upstream portion of the embankment and trenches for the 8-inch and 12-iach diameter toe drains under the downstream portion of the embankment shall be excavated in the embankment foundation as shown on the drawings or as directed by the contracting officer. The contemplated alinements and cross-sectional dimensions of the trenches are shown on the drawings; but the alinements and dimensions shown will be subject to such changes as may be found necessary by the contracting officer to adapt the toe drains and cut-off trench to the conditions disclosed by the excavation, and the contractor shall be entitled to no additional allowance above the unit prices bid in the schedule for excavation for embankment toe drains and cut-off trench on account of such changes. Accurate trimming of the slopes of the trenches will not be required but the trenches shall conform as closely as practicable to the lines and grades shown on the drawings or established by the contracting officer. No blasting will be permitted in the cut-off trenches unless such blasting is approved in writing by the contracting officer. The contractor, shall separate the suitable material from common excavation for toe drains and cut-off trench into cobbles 21/2 inches or more in

diameter, which shall be placed in the cobble-fill portion of the embankment, and material less than 2½ inches in diameter, which shall be placed in the earth-fill portion of the embankment. Measurement, for payment, of the excavation for the trenches described in this paragraph will be made only to the lines shown on the drawings or established by the contracting officer, below the level of the embankment foundation after stripping, and payment for such excavation will be made at the unit prices per cubic yard bid in the schedule for excavation for embankment toe drains and cut-off trench.

- 49. Excavation for concrete cut-off wall footings. Where the cut-off trench with sloping sides under the upstream portion of the embankment is excavated to rock, trenches for footings for concrete cut-off walls shall be excavated in the bottom of the cutoff trench, as shown on the drawings or as directed by the contracting officer. The tranches shall have vertical sides and shall be excavated to the alinements and dimensions shown on the drawings or as directed by the contracting officer. The excavation shall be performed by the use of hand tools or power cutting drills, in such a manner as to prevent shattering the sides or bottom of the trench and no blasting will be permitted. Measurement, for payment, of excavation for concrete cut-off wall footings will be made only to the neat lines shown on the drawings or established by the contracting officer, and payment therefor will be made at the unit price per cubic yard bid in the schedule for excavation, rock, for concrete cut-off wall footings.
- 50. Backfill about structures.—Backfill is defined as excavation refill or embankment material that is required to be placed under these specifications and which cannot be deposited around the structures or in adjacent embankments until the structures are completed; Provided, That embankment material surrounding or abutting the concrete cut-off walls, spillway structure, trash-rack structure, outlet conduit, spiral-stairway shaft, and other structures or parts of structures against which compacted dam embankment is placed after the construction of the structure, will be classified as embankment and will not be paid for as backfill. The contractor shall place and thoroughly compact all backfill about structures. The compaction obtained shall be equivalent to that specified in paragraph 55 for the earth-fill portion of the dam embankment, and, in inaccessible places where the backfill material cannot be rolled, pneumatic or electrical backfill tampers shall be

used. The item of the schedule for backfill about structures includes the continuous selected gravel backfill required to be placed at the base of the back side of the cantilever walls of the spillway and outlet channels: Provided, That the gravel backfill need not be compacted. The material used for backfill, the amount

thereof, and the mann'r of depositing the material shall be subject to the approval of the contracting officer. Material used for backfill will be measured in place about the structures and to the lines of the required backfill as established by the contracting officer, and payment for backfill about structures will be made at the unit price per cubic yard bid therefor in the schedule, which unit price shall include the cost of all work connected therewith except that payment for the original excavation of material required for backfill will be made as provided in paragraphs 43 and 52.

- 51. Refill of diversion channel.—After the river has been diverted through the outlet works and the diversion channel is no longer required for diversion purposes, the portion of the channel downstream from the embankment shall be refilled to the lines established by the contracting officer. It will not be necessary to remove the log cribs at the downstream end of the channel before the channel is refilled. No special compacting of the refilled material will be required. Measurement for payment, of the refilled material will be made of the material in place in the diversion channel and to the lines, grades and dimensions shown on the drawings and payment therefor will be made at the unit price per cubic yard bid in the schedule for refill of diversion channel. If, as provided for in paragraph 39, the contractor elects to construct the diversion channel to a larger capacity than shown on the drawings, the additional excavation required to construct the channel to the larger size shall be refilled by and at the expense of the contractor.
- 52. Borrow pits.—All materials required for the construction of the dam embankment, for riprap for the spillway and 78 diversion channels, and for backfill, which are not available from required execuations, shall be taken from borrow pits as directed by the contracting officer. The location and extent of all borrow pits shall be as directed by the contracting officer, and the Government reserves the right to change the location of such borrow pits of to locate additional borrow pits as required, but such pits will be located as close as feasible to the work in which the borrowed materials are to be used. The rock for the riprap on the upstream slope of the dam embankment and for the spillway and diversion channels shall be obtained from a rock borrow pit near the existing road and approximately seven miles upstream from the dam site: Provided, That at the option of the contractor, the rock for the dumped riprap in the outlets of the spillway and diversion channels may be obtained from the river channel or vicinity upstream from the outlet of the spillway channel. No payment for overhaul will be made for rock materials excavated in the rock borrow pit and used for riprap on the upstream slope of the dam embankment or in the spillway or diversion channels. The limit of free haul for materials excavated from borrow pita for

the earth-fill and cobble and sluiced gravel-filled portions of the embankment will be 5,000 feet, and for cobbles excavated from borrow pits for the cobble-fill portion of the embankment will be 2,500 feet. Overhaul of earth-fill, cobble and sluiced gravel-fill, and cobble-fill materials placed on the embankment will be paid for at \$0.002 per cubic yard per 100-foot station. The amount of overhaul in station cubic yards for which payment will be made will be the excess, if any, of the sum of the products of the station haul distance and the number of cubic yards of material excavated from each borrow pit and placed in the embankment, over the sum of the total volume of earth-fill and cobble and sluiced gravel-fill material obtained from borrow pits times the specified free haul distance for earth borrow plus the total volume of cobble-fill mate-

rial obtained from borrow pits times the specified free haul . 79 distance for cobble borrow. The station haul distances will be measured along horizontal straight lines between the centers of gravity of the materials as found in excavation in the borrow pits and the center of gravity of the completed embankment. No progress payment will be made for overhaul, but all overhaul earnings under the contract will be included in the final estimate. Borrow-pit areas shall be cleared as provided in paragraph 40. Borrow pits shall be operated so as not to mar the usefulness or appearance of any part of the work of any other property of the Government, and borrow pits and the surfaces of wasted material shall be left in a reasonably smooth and even condition satisfactory to the contracting officer. The area of land between the cobble borrow pit and the river shall be kept in its original state and no improvements or removal of timber will be permitted on this area except with the written permission of the contracting officer. Should any borrow pits be located adjacent to the dam and below the level of the top of the dam, a berm of not less than 100 feet shall be left between the toe of the dam and the edge of the borrow pit, with provision for a side slope of 4 to 1 to the bottom of the borrow pit. In order to avoid the formation of pools, drainage ditches from borrow pits to the nearest outlets shall be constructed by the contractor, where, in the opinion of the contracting officer, such drainage ditches are necessary. The contractor shall carefully strip the sites of borrow pits, or as much thereof. as may be required, of top soil, sod, loam, and other objectionable matter. The disposal of all materials wasted by stripping shall be subject to the approval of the contracting officer. Measurement for payment for stripping borrow pits will be made in excavation and will include only the stripping in locations and to the depths as directed by the contracting officer. Payment for stripping and disposal of materials wasted by stripping will be made at the unit price per cubic yard bid in the schedule for "Excavation, stripping

borrow pits." If materials unsuitable for embankment, riprap, or backfill purposes are found in borrow pits, such materials shall be left in place or excavated and wasted, as directed by the contracting officer, and payment for excavation and disposal of unsuitable materials excavated and wasted by direction of the contracting officer will be made at the unit price per cubic yard bid in the schedule for "Excavation, stripping borrow pits." The contractor shall separate the cobbles 21/2 inches or over in size from the materials excavated in the cobble borrow pits. The separated cobbles shall be placed in the cobble-fill portion of the embankment, and the undersize material, if suitable, in the opinion of the contracting officer, shall be placed in the earth-fill portionof the embankment. Materials excavated from cobble borrow pits will not be classified for payment. Payment for excavation in borrow pits and transportation to embankment and to spillway and diversion channels will be made at the unit prices per cubic yard bid therefor in the schedule, which unit prices shall include the entire cost of excavating the materials from the borrow pits, separating the material excavated from cobble borrow pits, and transporting the materials to the embankment and to the spillway and diversion channels: Provided, That all materials from borrow oits actually placed in the embankment, in the spillway and diversion channels, or in backfill will again be included for payment under appropriate items of embankment construction, riprap, or backfill. Measurement, for payment, of excavation in borrow pits will be made in excavation only and to the neat lines of excavations made by direction of the contracting officer.

53. Disposal of excavated materials.—Suitable materials from all required excavations and from all foundation stripping operations shall be used in the embankment, for backfill, or for other parts of the work. Excavated materials which are unsuitable for the above-described purposes and all unsuitable materials removed in stripping operation shall be wasted. This disposal of all exca-

vated materials that are wasted shall be subject to the approval of the contracting officer. All waste piles shall be located where, in the opinion of the contracting officer, they will not harmfully interfere with the natural flow of the river, with the operation of the reservoir; or with the discharge of water to or from the spillway or outlet works, and where they will not detract from the appearance of the completed structures or interfere with the accessibility of the structures for operation. Where required by the contracting officer, waste piles shall be leveled and trimmed to reasonably regular lines, and the contractor shall be entitled to no additional compensation on account of this requirement. The cost of disposing of all excavated materials that are wasted and of all other work described in this paragraph shall be included in

the unit prices bid in the schedule for excavation and stripping. As provided in paragraph 54, payment for placing, materials from required excavations in the embankment will be made at the unit prices per cubic yard bid in the schedule for the particular items of embankment construction, which payment will be in addition to the payment for the excavation and transportation of materials.

## EMBANKMENT.

54. Embankment construction, general.—For the purposes of these specifications, the term "embankment" includes the earth-fill portion of the dam, the cobble and sluiced gravel-fill at-the downstream toe of the dam, the cobble and rock fills on the slopes of the dam, and the riprap on the upstream face of the dam. The embankment shall be constructed to the lines and grades established by the contracting officer; which, in general, will be the lines and grades shown on the drawings, increased by such heights and widths as may be determined by the contracting officer to be necessary to allow for settlement. No brush, roots, sod, or other perishable or unsuitable materials, as determined by the contracting officer, shall be placed in the embankment. The suitability of each part of the foundation for placing embankment ma-

82 terials thereon and of all materials for use in the embankment construction will be determined by the contracting offi-No material shall be placed in the embankment when either the material or the foundation or embankment on which it would be placed is frozen. The contractor shall maintain the embankment in a manner satisfactory to the contracting officer until the final completion and acceptance of all of the work under the contract. Each portion of the embankment shall be constructed in accordance with the specifications therefor, including the provisions of this paragraph. All portions of the required embankment, whether constructed of materials exervated for other required parts of the work or from borrow pits, will be measured and paid for in embankment, after compacting if required, which payment will be in addition to the payment made for the excavation, separation, and transportation of the required materials, and shall include the cost of rehandling materials taken from required excavations and deposited temporarily in storage piles, and placing the materials as herein specified. It may be feasible to transport a large portion of the materials which are excavated for other required parts? of the work and which are suitable for embankment construction, directly to the embankment at the time of making the excavation, but the contractor shall be entitled to no additional compensation above the unit prices bid in the schedule for excavation and embankment by reason of it being necessary or required by the contracting.

officer, for any reason; that such excavated materials be deposited

in temporary storage piles prior to transporting to the embankment.

55. Earth fill in embankment.—The earth-fill portion of the embankment shall be constructed to the lines and grades shown on the drawings or established by the contracting officer. All portions of test-pit and cut-off trench excavation within the area to be covered by the embankments and below the required stripping lines for the embankment foundation shall be filled with com-

for the embankment foundation shall be filled with compacted material as herein specified for earth fills and shall be considered as parts of the earth fill.

- (a) Preparation of foundations.—No material shall be placed in the earth-fill portion of the dam until the foundation therefor has been unwatered and suitably prepared and has been approved by the contracting officer. The foundation for the earth-fill shall be so prepared, by leveling and rolling, that the surface materials of the foundation will be as compact and well bonded with the first layer of the fill as herein specified for the subsequent layers of the earth fill.
- (b) Materials.—The earth-fill portion of the dam shall consist of a mixture of the clay, sand, and gravel available from borrow pits in the vicinity of the work and from excavations required for other parts of the work. The contractor's operations in the excavation of the materials for the earth fill shall be such as will result in an acceptable gradation of the materials when compacted in the fill. The contracting officer will designate the depths of cut in all parts of the borrow pits and in portions of required excavations to be used in the embankment, necessary for obtaining the desired gradation of material, and the cuts shall be made to such designated depths. Each load of earth-fill material delivered on the embankment shall be the equivalent of a mixture of materials obtained from an approximately uniform strip or cutting from the full height of the face of the excavation.
- (c) Placing.—The distribution and gradation of the materials throughout the earth-fill portion of the dam shall be such that the earth embankment will be free from lenses, pockets, streaks, or layers of material differing materially in texture or gradation from the surrounding material. The combined excavation and embankment-placing operations shall be such that the materials when compacted in the embankment will be blended sufficiently to secure the best practicable degree of compaction, impermeability, and stability.

Successive loads of material shall be dumped on the em-84 bankment so as to produce the best practicable distribution of the material, subject to the approval of the contracting officer, and for this purpose the contracting officer may direct the points in the embankment where the individual loads shall be deposited, to the end that the finer material shall be placed in the central upstream portion of the earth-fill, including the cut-off trench, and the sand and gravel content in the earth fill will be gradually, increased toward the upstream and downstream slopes of the earth-fill. No stones having maximum dimensions of more than five inches shall be placed in the earth-fill portion of the embankment. Should stones of such size be found in otherwise approved earth-fill embankment materials; they shall be removed by the contractor either at the site of excavation or after transporting to the embankment, but prior to rolling and compacting the materials in the embankment. Such stones shall be placed in the cobble-fill portion of the embankment as approved by the contracting officer. The mixture of clay, sand, and gravel shall be placed in the earth embarkment in continuous, approximately horizontal layers not more than six inches in thickness after rolling as herein specified. If, in the opinion of the contracting officer, the surface of the prepared foundation or the rolled surface of any layer of the earth fill is too dry or smooth to bond properly with the layer of material to be placed thereon, it shall be moistened and/or scarified to the satisfaction of the contracting officer before the next succeeding layer of earth-fill material is placed. The earth-fill on each side of the cut-off walls shall be kept at approximately the same level. as the placing of the earth fill progresses, and the walls shall be carefully protected against displacement or other damage. upstream slope of the earth fill' shall be thoroughly compacted. reasonably true to line and grade, and all projections of more than six inches outside of the neat lines of the earth fill shall be removed at the contractor's expense before the riprap is placed. The upper

12 inches of the crest of the dam embankment shall be constructed of selected gravelly material or selected fine rockmaterial satisfactory to the contracting officer and shall be finished on top so as to be suitable for a roadway, as directed by the contracting officer.

- (d) Moisture control.—Prior to and during rolling the material in each layer of the earth fill shall have the optimum practicable moisture content required for compaction purposes, as determined by the contracting officer, and the moisture content shall be uniform throughout the layer. Insofar as practicable, as determined by the contracting officer, the application of water to the material for this purpose shall be at the site of excavation, and shall be supplemented as required by sprinkling in place on the embankment, if necessary. Harrowing or other working of the material may be required to produce the required uniformity of water content.
- (e) Rollers.—Tamping rollers having staggered ball feet or knobs uniformly spaced to provide approximately one knob for each square foot of the area measured in a cylindrical surface passing through the faces of the knobs, and equipped with suitable cleaners shall be used for compacting the embankments. The bearing area

of such foot or knob shall be not less than six square inches, and the foot or knob shall extend radially beyond the drum of the roller not less then seven inches. The unit pressure on the knobs, computed by dividing total weight of each roller, in pounds, when operating by the total bearing area, in square inches, of the maximum number of feet or knobs in one row parallel to the axis of the roller, shall not be less than 340 pounds per square inch: Provided, That not less than one knob for each foot of length of drum shall be used in computing the unit pressure on the knobs. Each drum shall be free to pivot about an axis parallel to the direction of travel. The design, loading, and operation of the rollers shall be subject to the approval of the contracting officer.

- (f) Rolling.—When each layer of material has been conditioned to have the optimum practical moisture content required for compaction purposes, as provided in subparagraph (d), it shall be compacted by passing the tamping roller, as specified above, over it 12 times. If the moisture content is greater or less than the optimum for compaction, the rolling shall not proceed ... cept with the specific approval of the contracting officer, and, in that event, additional rolling shall be done, as directed by the contracting officer, to obtain the required compaction, and no adjustment in price will be made therefor. If, with the optimum moisture content, it is found desirable to roll each six-inch layer more or less than 12 times to obtain the desired compaction, the number of rollings shall be changed accordingly, as directed by the contracting officer, and adjustment will be made in the unit price bid for compacted embankments in the amount of 25/100 cents per cubic yard for each additional or lesser number of rollings required.
- (g) Tamping.—Portions of the earth-fill between rock projections on the dam abutments, near cut-off walls and other concrete structures, and elsewhere, which in the opinion of the contracting officer cannot be compacted properly by the use of rolling equipment shall be thoroughly compacted by the use of mechanical tampers. The area surrounding the outlet conduit to arthickness of five feet shall be compacted by mechanical-tamping methods or by other methods which in the opinion of the contracting officer will not injure the concrete outlet conduit. The degree of compaction for such portions of the earth fill described above shall be equivalent to that obtained by moistening and rolling as specified for other portions of the earth fill.
- (h) Payment.—The cost of all work required for the completion of the earth-fill portions of the embankments as described in this paragraph, except the excavation and transportation of the materials required for the earth fill, shall be included in the unit price bid in the schodule for earth fill in embankments.

56. Cobble and sluiced gravel fill at downstream toe of embankment .- A cobble fill sluiced with sand and gravel shall be constructed at the downstream toe of the embankment as shown on the drawings or as directed by the contracting officer. The fill shall consist of a free-draining mixture of cobbles, gravel, and sand from required excavation or from borrow pits. cobbles used shall not exceed one cubic yard in volume and the gravel used shall not be larger than 21/2 inches in diameter. fine materials used in the fill shall be selected as directed by the contracting officer, for gradation and freedom from silt and clay. The larger cobbles shall be placed near the downstream edge of the fill. The cobbles shall be placed in approximately horizontal layers not exceeding three feet in thickness, and as the placing of each layer of cobbles progresses, the sand and gravel shall be sluiced into the voids in the cobble fill by a stream of water having sufficient force to move the material into place and completely fill the voids. Measurement, for payment, of the cobble and sluiced gravel fill at the downstream toe of the dam will be made only to the lines and grades shown on the drawings or established by the contracting officer. Payment for the cobble and sluiced gravel fill at downstream toe of embankment will be made at the unit price per cubic yard bid therefor in the schedule, which unit price shall include the cost of selecting and placing the materials, furnishing the water and sluicing the sand and gravel into the voids, and of all other operations, except the excavation, separation, and transportation of the materials required for the completion of the fill as described in this paragraph.

57. Cobble and rock fills on slopes of embankment.—The cobble and rock fills on the downstream slope of the dam embankment and on the upstream slope of the dam embankment at the inlet to the spillway channel shall be constructed to the lines and grades shown on the drawings or established by the contracting officer. The cobble and rock fills shall consist of cobbles over 2½ inches in

diameter separated from required excavation and from materials excavated from cobble borrow pits as provided in paragraph 51. The rock fill shall consist of a suitable free-draining mixture of rock fragments from required rock excavation. The
largest rock or cobbles in the fills shall be not more-than one cubic
yard in volume. The inclusion of gravet or rock spalls in the rock
fill in an amount not in excess of that required to fill the voids in
the coarser material, as determined by the contracting officer, will
be permitted. Successive loads of material shall be dumped so as
to secure the best practicable distribution of the materials as determined by the contracting officer. The cobble and rock fills shall
be placed in approximately horizontal layers not exceeding three
feet in thickness. The materials in the fills need not be hand-placed
or especially compacted, but shall be dumped and the dumped

piles shall be roughly leveled, in a manner satisfactory to the contracting officer, so as to maintain a reasonably uniform surface and insure that the completed fills will be stable and that there will be no large unfilled spaces within the fills. Payment for cobble and rock fills on the slopes of the embandment will be made at the unit price bid therefor in the schedule, which unit price shall include the cost of selecting and placing the rock and cobbles, and of all other operations, except the excavation and transportation of the materials, required for the completion of the cobble and rock fills as described in this paragraph.

58. Riprap on upstream slope of embankment and in inlet channel to spillway.—The upstream slope of the dam embankment above the berm at elevation 7580 and the side slope of the inlet channel to the spillway shall be covered with a layer of rock riprap three feet in thickness. The rock riprap shall consist of hard, dense, and durable rock obtained from the rock borrow pit as described in paragraph 52. The largest rock in the riprap shall be not more than one-half of a cubic yard in volume, and the average volume

of the pieces shall be not less than one cubic foot. .89 inclusion of objectionable quantities, as determined by the contracting officer, of loose dirt, sand, and rock dust will not be permitted. The rock in riprap need not be compacted but shall be dumped and graded off in such a manner as to insure that the larger rocks are uniformly distributed and the smaller rock fragments and spalls serve to fill the spaces between the larger rocks and in such a manner as will result in a reasonably smooth surface and a uniform layer of riprap of the thickness specified. Hand-placing will be required only to the extent necessary to secure the results specified above. Riprap will be measured for payment to the neat lines shown on the drawings or established by the contracting officer. Payment for riprap on the upstream slope of the embankment and in the inlet channel to the spillway will be made at the unit price per cubic yard bid therefor in the schedule, which unit price shall include the cost of selecting and placing the required materials and of all other operations, except the excavation and transportation of the materials, required for the completion of the riprap as described in this paragraph.

59. Dumped riprap in outlets of spillway and diversion channels.—The contractor shall place dumped riprap for the protection of the outlets of the spillway and diversion channels, as shown on the drawings or as directed by the contracting officer. The rock used shall be hard, dense, and durable rock obtained from the rock borrow pit as described in paragraph 52, or from the river channel or vicinity upstream from the outlet of the spillway channel. The volume of the pieces of the riprap in the spillway channel shall grade uniformly from approximately one cubic yard down to not less than one cubic foot. The volume of the pieces of the riprap

in the diversion channel shall grade uniformly from approximately one cubic yard down to not less than two cubic feet. The inclusion of gravel and rock spalls in the mass in an amount not in excess of that required to fill the voids in the rock as above specified, as

determined by the contracting officer, will be permitted.

The rock in the riprap need not be hand-placed but shall be dumped and leveled off so as to conform roughly to the established lines and so that there will be no unreasonably large unfilled spaces within the riprap. Payment for dumped riprap in outlets of spillway and diversion channels will be made at the unit price per cubic yard bid therefor in the schedule, which unit price shall include the entire cost of selecting and placing the materials and of all other operations, except the excavation and transportation of the materials, required for the completion of the riprap as described in this paragraph.

#### DRAINAGE

60. Drainage, general.-Drains shall be constructed under the downstream toe of the dam, under the floor of the spillway, underthe floor of the outlet channel, and elsewhere, as shown on the drawings or as directed by the contracting officer. A layer of porous concrete shall be placed under the floor of the spillwaygate structure, as shown on the drawings or as directed by the contracting officer and as described in paragraph 62. All pipe drains, except the four-inch diameter cast-iron pipe drain embedded in the concrete of the gate chamber and the 6-inch diameter metal pipe drain from the float well in the spillway-gate structure, shall be constructed of sewer pipe laid with open joints and embedded in trenches filled with screened gravel, as described in paragraph 61. The 4-inch diameter cast-iron pipe drain embedded in the concrete of the gate chamber to provide drainage from the gutter around the edge of the floor of the gate chamber shall be installed as described in paragraph 109. Payment for installing the 6-inch diameter metal-pipe drain from the float well in the spillwaygate structure will be made at the unit price per pound bid in the schedule for installing radial-gate hoists and operating and control mechanisms. Care shall be taken to avoid clogging the drains

during the progress of the work, and should any drain be91 come clogged from any cause before final acceptance of the
work it shall be cleaned out in a manner satisfactory to the
contracting officer or replaced by and at the expense of the contractor.

61. Constructing sewer-pipe drains.—Concrete or clay sewerpipe varying from 4 to 12 inches in diameter shall be laid with uncemented joints in the toe-drain trenches at the downstream toe of the dam embankment and in the drain-pipe trenches under the floor

of the spillway, and under the floor of the outlet channel, as shown on the drawings or as directed by the contracting officer. All sewer pipe and heavy burlap for covering the gravel bedding will be furnished to the contractor by the Government as provided in paragraph 25. All other materials required for the construction of the drains, including the gravel for bedding, shall be furnished by the contractor. In handling sewer pipe, care shall be used to avoid breakage, and the contractor will be charged for all sewer pipe in excess of one percent of the total amount of each size of pipe delivered to the contractor that is damaged in handling to such an extent that, in the judgment of the contracting officer, it is unfit for use. Gravel bedding of the thickness shown on the drawings or as directed by the contracting officer shall be placed in the bottom of the pipe trenches. The pipe shall be carefully laid on the gravel bedding with the bell end upgrade and with partially open, uncemented joints, in a workmanlike manner, and to the lines and grades established by the contracting officer. Gravel shall be carefully placed and tamped about the pipe so as not to disturb the pipe after being laid and to hold it securely in position while the embankment or concrete is being placed. The gravel shall be clean and well graded from 3/4 inch to 11/2 inches in size. The entire trench outside of the drain pipe shall be filled with gravel to the bottom or outside surface of the concrete. Rock fill shall not be dumped directly on the gravel but shall be carefully worked into place until a sufficient depth is placed to prevent breakage

92 of the pipe as determined by the contracting officer: Provided. That for drains under the downstream toe of the dam embankment, the contractor will be required to place only such quantity of gravel as may be required to provide a minimum thickness of six inches over the top and at the sides of the pipe. Where concrete is to be placed over or against the gravel about drain pipes; the gravel fill shall be covered with heavy burlap to prevent mortar from the concrete from entering the gravel-fill about the pipe. Measurement for payment for constructing the sewer-bipe drains will be made along the center lines of the pipe, from end to end of the pipe in place, and no allowance will be made for lap at joints. Payment for constructing sewer-pipe drains will be made at the unit prices per linear foot bid therefor in the schedule, which unit prices shall include the cost of unloading, hauling, storing, handling, preparing an even bedding, and placing the pipe; furnishing, hauling, handling, and placing the gravel fill about the pipe; placing burlap covering, where required; and of all other operations except the excavation of the trenches, required for the completion of the drains. Measurements, for payment, of excavation for; trenches for pipe drains under the floor of the spillway and inderthe floor of the outlet channel will be made only to the neat lines required to provide for the thickness of gravel fill around the drain

pipe as shown on the drawings or as directed by the contracting officer, and payment for excavation of the trenches will be made at the unit prices per cubic yard bid in the schedule for excavation for structures. Measurement of excavation for the embankment toe drains and payment therefore will be made as provided in paragraph 48.

62. Porous concrete.—Porous concrete shall be placed over the foundation of a portion of the spillway-gate structure, and elsewhere if required, as shown on the drawings or as directed by the contracting officer. Cement for the porous concrete will be furnished by the Government as provided in paragraph 25. All

63 other materials shall be furnished by the contractor. porous concrete shall be mixed in the proportion of one part of portland cement to five and one-half parts of aggregate, by weight. The aggregate shall conform to the provisions of paragraph 73, except that all of the aggregate shall pass a screen having 34-inch square or equivalent round openings and shall be retained on a when having 3/16-inch square or equivalent round openings. The amount of water used in the concrete shall be such (a water-cement ratio of 0.33 plus or minus, by weight) that the resulting cement paste will not fill the voids of the aggregate but will thoroughly coat and bind the aggregate particles. The compressive strength of the porous concrete at seven days, as determined by tests of 6by 12-inch cylinders made and tested in accordance with the latest standard specifications of the American Society for Testing Matehals, shall be not less than 1,000 pounds per square inch. The porosity of the concrete shall be such that water will pass through . a slab of the concrete 12 inches thick at the rate of not less than 10 gallons per minute per square foot of slab, with a constant 4-inch depth of water on the slab. The surface of the porous concrete shall be finished to the neat lines of the under side of the concrete structure. Immediately before concrete is placed upon or against porous concrete, the entire surface of contact between the porous concrete, and the concrete of the structure shall be moistened and covered with a layer one-half of an inch thick, of stiff mortar, as provided in paragraph 78, to prevent fresh mortar from the concrete from entering the porous concrete. Measurement, for payment, of porous concrete will be made to the neat lines of the finished surface of the porous concrete and to the thickness shown on the drawings or directed by the contracting officer. for porous concrete will be made at the unit price per cubic yard bid therefor in the schedule, which unit price shall include the cost of furnishing all materials, except cement, and of mixing and placing the porous concrete as described in this paragraph.

63. Drilling weep holes.—Weep holes shall be drilled through the floor of the trash-rack structure and elsewhere

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as shown on the drawings or directed by the contracting officer. All weep holes shall be drilled after the concrete has been placed, shall have a diameter of not less than 1½ inches, and shall be drilled through the concrete and into the rock to such depths as may be directed by the contracting officer. Weep holes will be measured for payment after the holes are drilled, and only the length of the holes actually drilled by direction of the contracting officer will be considered in making measurements. Payment for drilling weep holes will be made at the unit price per linear foot bid therefor in the schedule.

## 95-96 GENERAL TRAVERSE.—Filed March 26, 1945.

And now comes the ATTORNEY GENERAL, on behalf of the United States, and answering the petition of the claimant herein, denies each and every allegation therein contained; and asks judgment that the petition be dismissed.

(S.) Francis M. Shea, Assistant Attorney General.

J.S. N.A.C.

E.E.E.

## ARGUMENT AND SUBMISSION OF CASE

On April 4, 1950, the case was argued and submitted on merits by Mr. Harry D. Ruddiman for plaintiffs and by Mr. James J. Sweeney for defendant.

# 97 Special Findings of Fact, Conclusion of Law and Opinion of the Court by Madden, Judge—Filed June 5, 1950

Mr. Harry D. Ruddiman for the plaintiff. King & King were on the briefs.

Mr. James J. Sweeney, with whom was Mr. Assistant Attorney General H. G. Morison, for the defendant.

This dase having been heard by the Court of Claims, the court, upon the evidence and the report of a commissioner, makes the following

SPECIAL FINDINGS OF FACT

#### GENERAL

1. The plaintiffs are citizens of the United States and are the members of a partnership "Martin Wunderlich Company," herein-

after referred to as plaintiff, which is engaged in the construction

business with its home office in Jefferson City, Missouri.

2. On March 14, 1938, pursuant to open bidding, the Martin Wunderlich Company entered into contract No. 12R-8413, with the United States represented by S. O. Harper, Acting Chief Engineer, Bureau of Reclamation, Denver, Colorado, as contracting officer,

to furnish materials and perform all work for the construction of the Vallecito Dam, in accordance with the specifications,

schedules, drawings, and supplemental notices to bidders dated November 10 and 29, 1937, for an estimated consideration of \$2,115,870.00. Certain materials were to be furnished by the United States Government as specified under Paragraph 25 of the Specifications. The contract, specifications, and drawings are in evidence as Plaintiff's Exhibit A and as Defendant's Exhibit F, and are made a part hereof by reference.

3. The contractor was required to begin work within 30 days after receipt of notice to proceed and to complete the work within 1,350 days thereafter. Notice to proceed was received on April 18, 1938, thereby fixing the completion date as December 18, 1941. The contract work was satisfactorily completed in October, 1941, in advance of the final completion date. Plaintiff was paid the net sum of \$2,220,965.30 for the contract performance, including extra work orders in the value of \$64,014.30, and after sundry deductions for materials, damages, etc., of \$6,135.92.

4. The Vallecito Dam is located about 15 miles north of Bayfield, in the southern part of Colorado, on the Pine River just below the confluence of the Pine River and the Vallecito Creek. It was to be built for irrigation purposes and to serve the farmers in the locality. The Dam site had an elevation of approximately 7,550 feet.

The reservoir to be created by the Vallecito Dam covered about

129,000 acre-feet of water.

5. The main feature of the contract work was the rolled earth-filled dam. The crest length of the dam is about 4,000 feet and its maximum height is 7,673 feet elevation, or 125 feet above the bed of the stream. The base is about 600 feet wide at its widest portion and the crest is uniformly 35 feet wide. The upstream slope is 3 to 1 and the downstream slope is 2 to 1 at the upper portion, breaking into a 4 to 1 slope and finally tapering off into a long comparatively flat section on a 10 to 1 slope.

The main dam embankment includes the earth-filled portion of the dam, the cobble-sluided gravel at the downstream toe of the dam the cobble and rock alls on the slopes of the dam and the

rock riprap on the upstream face.

6. The embankment proper consists of three zones; that is, Zone No. 1 at the upstream side which is constructed of selected stable material grading to gravel at the upstream slopes; Zone No. 2, or the Central Zone, which is constructed of

"impervious material" and Zone No. 3 which is constructed of a semi-impervious material grading to gravel at the downstream slope. The face of the upstream slope is covered with 3 feet of rock riprap and the face of the downstream slope is covered with cobbles.

7. The other features of the work were (1) the outlet conduit, a twin-barreled concrete structure through the embankment in the vicinity of the right abutment through which the flow of water from the reservoir was controlled by gates; (2) the outlet channel, lined with concrete, and extending 200 feet from the downstream end of the outlet conduit to a point where the outlet channel emptied into the spillway channel; (3) the spillway channel, a concretelined structure beginning at a point higher up on the right abutment, extending downstream 2,800 feet and through which the flow of flood water from the reservoir was controlled by means of gates at the upstream end; (4) the stilling basin, a concrete structure at the downstream end of the spillway channel through which the water flowing from the spillway channel and outlet channel passed before discharging into the river; and (5) a cut-off trench under the impervious section of the dam, backfilled with impervious materials, and also containing a concrete cut-off wall at each abutment.

The control house is located on the crest of the dam above the outlet channel and in this house are located the controls of the

gates in the outlet conduit.

8. The earth-filled portion of the embankment consists of a mixture of clay, sand, and gravel obtained from the excavations for required structures and from borrow pits in the vicinity. Such materials were to be spread upon the embankment in not more than six-inch lifts after compaction, brought to optimum moisture content either by drying or sprinkling as necessary, and compacted by 12 passages of a tamping roller.

Earth borrow pit areas were shown on the centract drawings, located on the right and left banks of the Pine River facing down-

stream in the reservoir basin above the dam.

The area on the right of the river was later designated as Borrow Pit No. 1 and that on the left as Borrow Pit No. 2

the site of the work two different times prior to the opening of bids. He stated that on his second visit he was accompanied by George Leonard as Assistant Superintendent; and that they were shown over the site by Charles A. Burns, an employee of the defendant, who later became the defendant's construction engineer for the contract. Mr. Wunderlich further stated that Mr. Burns pointed out to them on the ground the location of the earth borrow pit area on the right of the river, and that they inquired of him whether such area included lower ground between such point and the River, to

which inquiry Mr. Burns replied that it did not and that plaintiff would not be required to obtain borrow material from such low area. Mr. Burns testified and denied not only making such statement but denied having accompanied Mr. Wunderlich on such inspection tour and further denied ever having seen Mr. Leonard prior to the signing of the contract. It seems probable that the said Mr. Wunderlich did address to some employee of the defendant upon the occasion in question, an inquiry as to the limits of Earth Borrow Area No. 1, and that he may have received a reply to the effect that at that time it was not anicipated that there would be need to obtain borrow in the low areas. It is unreasonable however, to conclude that any employee of the defendant at that time would have stated unequivocally that no such need would arise.

Plaintiff's organization at the site was under the direction of its construction superintendent F. H. Stewart, under him as foremen

were John New and Floyd Helm.

Mr. Wunderlich visited the job at intervals, coming over for one-to three-day periods. George P. Leonard was plaintiff's assistant and general superintendent. He visited the job only two or three times during the entire performance period of work. Theodore Wunderlich, the brother of Martin Wunderlich, came on the job the summer of 1939; as foreman of the dragline; later he accompanied defendant's field inspector and took notes.

The defendant's contracting officer, as stated above, was
 O. Harper, who was acting chief engineer, and later

101 Chief Engineer, Bureau of Reclamation, and was stationed at Denver, Colorado. As field representative of the contracting officer, Charles A. Burns was the construction engineer and had under his charge at the site an organization consisting of a chief clerk, a field engineer, an office engineer, a resident engineer, laboratory aides and a field inspector.

J. R. Walton was the field engineer and earth-work inspector of the defendant. During the progress of the work he was in constant contact with plaintiff's representatives and consulted with them almost daily. The relationship between plaintiff's employees at the site and defendant's field force was at all times cerdial and co-

operative:

11. Operations began in May 1938 on the right side of the river as that seemed to be the feasible plan of operation. The first work consisted of building the camp and clearing and stripping the site of the dam foundation and spillway areas. Then the contractor began excavating the cut-off trench, outlet conduit and diversion channel. A large sand pocket, encountered in the area of the diversion channel, was wasted. Substantially all stripping in the construction area had been completed in 1938. Excavation of the di-

version channel was completed and the river was diverted about the cad of September 1938. Excavation progressed in the spillway and cut-off trench and part of the concrete cut-off wall had been constructed. Approximately 730,000 cubic yards of embankment had been placed in 1938. Operations were shut down because of the severe weather in December of that year. In the following year, operations began in April 1939 and continued until December when unfavorable weather again caused the work to be shut down. In 1940 the work was resumed in the spring and continued until November 1940. At that time the larger portion of the earth work had been completed and the major portion of the contractor's equipment was moved off the job site at the close of the season.

In the year 1941 considerable concrete work was finished, operating machinery was installed, and the top course of the embank-

ment was completed.

102 12. The contract provided in part as follows:

ARTICLE 3. Changes. The contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings and/or specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. No change involving an estimated increase or decrease of more than Five Hundred Dollars shall be ordered unless approved in writing by the head of the department or his duly authorized representative. Any claim for adjustment under this article must be asserted within 10 days from the date the change is ordered Provided, however. That the contracting officer, if he determines that the facts justify such action, may receive and consider, and with the approval of the head of the department or his duly authorized representative, adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in article 15 hereof. But nothing provided in this article shall excuse the contractor from proceeding with the prosecution of the work so changed.

ARTICLE 4. Changed conditions.—Should the contractor encounter, or the Government discover, during the progress of the work subsurface and/or latent conditions at the site materially differing from those shown on the drawings or indicated in the specifications, or unknown conditions of an unusual nature differing materially from those ordinarily encountered and generally recognized as inhering in the work of the character provided for in the plans and specifications,

the attention of the contracting officer shall be called immediately to such conditions before they are disturbed. The contracting officer shall thereupon promptly investigate the conditions, and if he finds that they do so materially differ the contract shall, with the written approval of the head of the department or his duly authorized representative, be modified to provide for any increase or decrease of cost and or difference in time resulting from such conditions.

ARTICLE 5. Extras.—Except as otherwise herein provided, no charge for any extra work or material will be allowed unless the same has been ordered in writing by the con-

tracting efficer and the price stated in such order.

ARTICLE 15. Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning question of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

ARTICLE 21. Definitions.—(a). The term "head of the department" as used herein shall mean the head or any assistant head of the executive department or independent establishment involved, and the term "his duly authorized representative" shall mean any person authorized to act for him.

(b) The term "contracting officer" as used herein shall include his duly appointed successor or his authorized repre-

sentative.

13. Scheduled prices, made a part of the specifications (spec. 705), are listed for 59 items of work. Of these itesm 1, 46 and 47 are lump-sum prices; all of the other items are unit prices for designated items of work. The ultimate price paid under the contract as determined by work actually performed was \$2,220,965.30 including extra Work Orders 1 to 8 and Change Orders 1 to 6.

14. The specifications provide in part as follows:

5. Quantities and unit prices.—The quantities noted in the schedule are approximations for comparing bids, and no claim shall be made against the Government for excess or deficiency therein, actual or relative. Payment at the prices agreed upon will be in full for the completed work and will cover materials,

supplies, labor, tools, machinery, and all other expenditures incident to satisfactory compliance with the contract, unless otherwise specifically provided.

6. Staking out work. The work to be done will be staked outfor the contractor who shall, without cost to the Government, provide such material and give such assistance as may be required by the contracting officer.

10. Extras. The contractor shall, when Lordered in writing by the contracting officer, perform extra work and furnish extra material, not covered by the specifications or included in the schedule, but forming an inseparable part of the work contracted for. Extra work and material will ordinarily be paid for at a lump sum or unit price agreed upon by the contractor and the contracting officer and stated in the order. Whenever in the judgment of the contracting officer it is impracticable because of the nature of the work or for any other reason to fix the price in the order, the extra work and material shall be paid for at actual necessary cost as determined by the contracting officer, plus 10 percent for superintendence, general expense, and profit. The actual necessary cost will include all expenditures for material, labor (including compensation insurance), and supplies furnished by the contractor, and a reasonable allowance for the use of his plant and equipment, where required, to be agreed upon in writing before the work is begun, but will in no case include any allowance for office expenses, general superintendence, or other general expenses. .

14. Protests.—If the contractor considers any work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the contracting officer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or using being made, ask for written instructions or decision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within 10 days after date of receipt of the written instructions or decision, he shall file a written protest with the contracting officer, stating clearly and in detail the basis of his objections. Except for such protests or objections as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions, or decisions of the contracting officer shall be, final and conclusive.

Instructions and/or decisions of the contracting officer contained in letters transmitting drawings to the contractors shall be considered as written instructions or decisions subject to protest or objections as herein provided.

- 20. Description. The dam will consist of a moistened and rolled embankment of elay, sand and gravel with a 3-foot blanket of rock riprap on the upstream face and a cobble and rock fill of increasing thickness from crest to toe on the downstream slope.
- 21. Drawings.—The following drawings are made part of these specifications:
  - 1. (28646) 191-D-41-Location map.
  - 2. (28547) 191-D-42-Hydrographs of Pine River.
    - 3. (28648) 191-D-43-Map of reservoir area.
- 4. (28649). 191-D-44-Location and log of drill holes and test pits.
  - 5. (28650) 191-D-45-Borrow pit and test-hole data.
  - 6. (26651) 191-D-46 General plan and sections.
- 7. (28652) 191-D-47-River diversion-Plan, profiles, and sections.
  - 8. (28653) 191-D-48-River diversion-Log drop details.
  - 9. (28654) 191-D-49 Spillway-Plan and sections.
  - 10. (28655) 191-D-50-Spillway-Gate structure details.
  - 11. (28656) 191-D-51-Spillway-Stilling pasin details.
- 12. (29334) 191-D-52 Spillway 37-foot by 19-foot automatic radial gate—Installation.
- 13. (29335) 191-D-53-Outlet works-Conduit alinement, profile and sections.
- 14. (29336) 191-D-54—Outlet Works—Gate chamber and control house.
- 15. (29337) 191-D-55-Outlet works-Inlet and outlet structures.
- 16. (28218) 40-D-2323-5-foot by 5-foot high-pressure gate—Assembly with hydraulic hoist.
  - 17. (293.8) 191-D-57-Electrical installation (sheet 1 of 2).
  - 18. (29339) 191-D-58—Electrical installation (sheet 2 of 2).
  - 19. (29340) 191-D-59-Construction program.

The drawings which form a part of these specifications show the work as definitely and in as much detail as is possible at the present state of development of the design. The attached drawings will be supplemented or superseded by such additional and detail drawings as may be necessary or desirable as the work progresses. Such drawings, which will show details not shown on the attached drawings, for all features of the work and for the installation of machinery or equipment not yet purchased; will not be considered to involve changes or extras within the meaning of articles 3 and 5 of the contract and paragraph 10 of these specifications. The contractor will be required to per-

of these specifications. The contractor will be required to perform the work on these features, and in accordance with 106 the additional and detail drawings mentioned above, at the applicable unit prices bid in the schedule for such work or work of a similar nature, as determined by the contracting officer. The contractor will be furnished such additional copies of the specifications and drawings as may be required for carrying out the work. Contact prints of the original drawings from which the attached reductions were made will be furnished to the contractor for construction purposes, upon request.

- 25. Materials furnished by the Government.—The Government will furnish cement for use in concrete, mortar, and grout;

  \* \* concrete or clay sewer pipe for drains; \* heavy buriap for use over drains; \* and also all other materials not specifically mentioned in this paragraph or in paragraph 26 that will become a part of the completed construction work. \*
- 28. Records of test pits and borings.—The drawings included in these specifications show the available records of test pits dug and borings made at or near the dam site. The Government does not guarantee any interpretation of these records or the correctness of any information shown on the drawings relative to geological conditions. Bidders and the contractor must assume all responsibility for deductions and conclusions as to the nature of the rock and other materials to be excavated, the difficulties of making and maintaining the required excavations and of doing other work affected by the geology of the site of the work, and for the final preparation of the foundations for the dam and other structures.
  - 30. Right to change location and plans.—When additional information regarding foundation or other conditions becomes available as a result of the excavation work, further testing, or otherwise, it may be found desirable to change the location,

alinement, dimensions, or design of the dam or appurtenant works to conform to such conditions. The Government reserves the right to make such reasonable changes as, in the opinion of the contracting officer, may be considered necessary or desirable, and the contractor shall be entitled to no extra compensation because of such changes, except that any increase in the amount of excavation, concrete, or other required work,

for which items are provided in the schedule, will be paid for at the unti prices bid therefor in the schedule.

The contractor's plant shall be laid out and his operations shall be conducted so as to accommodate any reasonable change in the location and design of the dam' and appurtenant works, or any part thereof, without additional cost to the Government.

15. During the progress of the work numerous conferences and conversations were carried on by plaintiff's superintendent (Stewart) with either Mr. Burns, the construction engineer, or Mr. Walton; the field engineer of the defendant. At times, Mr. Stewart would contend that work he was directed to do by one or the other of defendant's representatives was extra work and not covered by contract requirements. On some of these occasions he would request written instructions from the defendant for the perfermance of such work. It was the custom of the defendant's representatives on such occasions to point out to Mr. Stewart the provisions of the contract or specifications under which, in their opinion, the work. in question was required. If the work in question was, in their opinion, covered by the contract and specifications, they told Mr. Stewart that written instructions were unnecessary and declined to issue them. On many occasions Mr. Stewart would thereupon proceed with the performance of the work without making a formal written protest, on his avowed understanding that written protest could not be made until he had received written instructions.

Where defendant's representatives considered work to be outside of or a change in the contract requirements, written instructions to the contractor were issued.

16. In connection with certain claims plaintiff used a schedule of equipment rental rates, which it says was agreed to by the construction engineer, Charles A. Burns. Said Burns had no authority to enter into an agreement with the plaintiff as to equipment rental rates and under the weight of the evidence no such agreement was entered into. The Bureau of Reclamation maintained a schedule of equipment generally required in construction work, with bases for computing rental values. The annual rental rates suggested in the schedule of the Associated General Contractors were adopted

by the Bureau of Reclamation in preparing its equipment 108 rental tables. This schedule is adequate for a determination of rental values on any equipment used by plaintiff on this job.

17. On January 15, 1940, the contractor made written claim to the contracting officer on 23 items. These claims were forwarded to the construction engineer for a statement of facts and recommendations. Following conversations of January 25 and 27, 1940, the contractor submitted to the construction engineer further detailed information regarding such claims.

Subsequently many additional conferences were had between the parties either at the job site or in the contracting officer's head-quarters at Denver, at which conferences the contractor was given an opportunity to present any facts and arguments desired.

18. On February 16, 1942, the contractor advised the contracting officer that it would not accept the final estimate voucher of \$123,044.74 nor allowances under orders for changes No. 3, 4, and 5, amounting to \$51,283.85, or a total of \$174,328.59, as final settlement for the work.

Later the contractor did accept the final voucher estimate and executed a final release but reserved and excepted therefrom 42 claims aggregating \$463,547.47, and a 43rd item claiming interest thereon.

- 19. On March 13, 1942, the contractor forwarded to the contracting officer the final voucher, signed and accompanied by a release dated March 14, 1942, reserving specific claims numbered from 1 to 43, inclusive, with certain omissions. Omitted from the said claims were those numbered 12, 15, 16, 19, 22, 24, 25, 26, 29, and 30. These claims had been abandoned. Claim No. 43 reserved in the release was for interest and this claim has also been abandoned.
- 20. On July 11, 1942, Walker R. Young, acting Chief Engineer, and contracting officer, advised the contractor by letter that it had not submitted supporting data relating to claims 36 to 42. Such data was submitted by the contractor under date of July 25, 1942.

Thereafter numerous conferences were had between the parties at which times various matters involved in the claims were discussed.

109 21. On December 29, 1942; S. O. Harper, Chief Engineer and contracting officer, made written findings of fact on plaintiff's claims. All of said claims were denied except those numbered 5, 6, 10, 13, 17, 18, 20, and 41. Upon such claims the contracting officer allowed amounts as follows:

No. 5	\$2,450.00
No. 6 and No. 10	159.43
No. 13	4,125.00

No. 47		44,208.85
No. 18		466.40
No. 20		1,279.95
No. 41		500.00
A Training	Total	°\$53:189.63

The contracting officer did not refuse to consider any item of claim on the ground that the contractor had not made timely protest or objections in conformity with Paragraph 14 under the specifications.

All claims were considered on their merits.

As to some, the contracting officer stated: "The contractor failed to make its objections and protests of record in the manner and within the time limits required by the contract."

Claim No. 42 was denied as being vague and unsubstantial.

Pursuant to Article 15 of the contract and within the time therein provided, the contractor appealed to the head of the department from the contracting officer's findings as to all claims except those numbered 5, 13, 18, 28, 38, 39, 41, and 42. On July 7, 1943, the head of the department affirmed the action of the contracting officer.

22. There are for consideration in this case plaintiff's claims numbered 1, 2, 3, 4, 5, 6, 7, 8, 10, 11, 13, 17, 18, 20, 27, 31, 33, 34, 35, 37, and 41. As to ck ims numbered 5, 13, 18, and 41, the amounts have been approved by the contracting officer and agreed to by the plaintiff, but these amounts have not been paid to the contractor. There is no contest as to these claims. As to claims numbered 6 and 10, 17, and 20, the amounts allowed by the contracting officer are less than those claimed by the contractor, and none of the amounts so allowed by the contracting officer has been paid to the contractor. The claims will be taken up serially.

# 110 ..... CLAIM No. 1

Extra costs alleged to be due for excavating wet material on the right side of the river in extensions of Borrow Pit No. 1.

# 23. Paragraph 52 of the specifications is as follows:

52. Borrow pits.—All materials required for the construction of the dam embankment, for riprap for the spillway and diversion channels, and for backfill, which are not available from required excavations, shall be taken from borrow pits as directed by the contracting officer. The location and extent of all borrow pits shall be as directed by the contracting officer, and the Government reserves the right to change the location of such borrow pits or to locate additional borrow pits as required, but such pits will be located as close as feasible to the work in which the borrowed materials are to be used. The rock for the riprap on the upstream slope of the dam embank-

ment and for the spillway and diversion channels shall be obtained from a rock borrow pit near the existing road and approximately seven miles upstream from the dam site: Provided. That at the option of the contractor, the rock for the dumped riprap in the outlets of the spillway and diversion channels may be obtained from the river channel or vicinity upstream from the outlet of the spillway channel. No payment for overhaul will be made for rock materials excavated in the rock borrow pit and used for riprap on the upstream. slope of the dam embankment or in the spillway or diversion channels. The limit of free haul for materials excavated from borrow pits for the earth-fill and cobble and sluiced gravelfilled portions of the embankment will be 5,000 feet, and for cobbles excavated from borrow pits for the cobble-fill portion of the embankment will be 2,500 feet. Overhaul of earth-fill, cobble and sluiced gravel-fill, and cobble-fill materials placed on the embankment will be paid for at \$0.002 per cubic yard per 100-foot station. The amount of overhaul in station cubic yards for which payment will be made will be the excess, if any, of the sum of the products of the station haul distance and the number of cubic yards of material excavated from each borow pit and placed in the embankment, over the sum of the total volume of earth-fill and cobble and sluiced gravel-fill material obtained from borrow pits times the specified free haul distance for earth borrow plus the total volume of cobble-fill material obtained from borrow

pits times the specified free haul distance for cobble borrow. The station haul distances will be measured along horizontal straight lines between the centers of gravity of the materials as found in excavation in the borrow pits and the center of gravity of the completed embankment. progress payment will be made for overhaul but all overhaul earnings under the contract will be included in the final estimate. Borrow-pit areas shall be cleared as provided in paragraph 40. Borrow pits shall be operated so as not to marthe usefulness or appearance of any part of the work of any other property of the Government, and borrow pits and the surfaces of wasted material shall be left in a reasonably smooth and even condition satisfactory to the contracting officer. The area of land between the cobble borrow pit and the river shall be kept in its original state and no improvements or removal of timber will be permitted on this area except with the written permission of the contracting officer. Should any borrow pits be located adjacent to the dam and below the level of the top of the dam, a berm of not less than 100 feet shall be left between the toe of the dam and the edge of the borrow pit, with provision for a side slope

of 4 to 1 to the bottom of the borrow pit. In orde to avoid the formation of pools, drainage ditches from borrow pits to the nearest outlets shall be constructed by the contractor. where, in the opinion of the contracting officer, such drainage ditches are necessary. The contractor shall carefully strip the sites of borrow pits, or as much thereof as may be required, of topsoil sod, loam, and other objectionable matter. The disposal of all materials wasted by stripping shall be subject to the approval of the contracting officer. Measurement for payment for stripping borrow pits will be made in excavation and will include only the stripping in locations and to the depths as directed by the contracting officer. Payment for stripping and disposal of materials wasted by stripping will be made at the unit price per cubic yard bid in the schedule for "Extavation, stripping borrow pits." If materials unsuitable for embankment, riprap, or back-fill purposes are found in borrow pits, such materials shall be left in place or excavated and wasted, as directed by the contracting officer, and payment for excavation and disposal of unsuitable materials excavated and wasted by direction of the contracting officer will be made at the unit price per cubic yard bid in the schedule for "Excavation, stripping borrow pits." The contractor shall separate the cobbles 21/2 inches or over in size from the materials.

112 excavated in the cobble borrow pits. The separated cobbles shall be placed in the cobble-fill portion of the embankment, and the undersize material, if suitable, in the opinion of the contracting officer, shall be placed in the earth-fill portion of the embankment. Materials excavated from cobble borrow pits will not be classified for payment. Payment for excavation in borrow pits and transportation to embankment and to spillway and diversion channels will be made at the unit prices per cubic yard bid therefor in the schedule, which unit prices shall include the entire cost of excavating the materials from the borrow pits separating the material excavated from cobble borrow pits, and transporting the materials to the embankment and to the spillway and diversion channels: Provided, That all materials from borrow pits actually placed in the embankment, in the spillway and diversion channels, or in backfill will again be included for payment under appropriate items of embankment construction, riprap or backfill. Measurement. for payment, of excavation in borrow pits will be made in excavations only and to the neat lines of excavations made by direction of the contracting officer.

The contract drawing 191-D-45 shows in the reservoir basin above the dam on the right side of Pine River looking downstream an area enclosed in a broken line demoninated "earth embankment borrow pit area." This general area on the right side of the river was later designated "Borrow Pit No. 1."

24. In the early fall of 1939 the main dam embankment had reached the stage where the construction of Zone No. 2 containing impervious material had advanced beyond the construction of Zone No. 1 and Zone No. 3 and it was necessary to bring Zone No. 1 and Zone No. 3 up to the level of Zone No. 2.

At this time the supply of material suitable for Zones No. 1 and No. 3 in the area above described marked "earth embankment pit area" on the right-hand side of the river was largely depleted and it became necessary to obtain the required material from some other source or sources.

By explorations conducted by the defendant with auger holes and test pits, defendant discovered sources of the suitable material on lower ground down near Pine River. Such material to

the depth of from 6 to 12 inches was unsuitable as it

necessary to strip the area in question before the desired material could be obtained. The defendant did not desire to incur the expense of such stripping unless this operation could be followed by a production of a substantial quantity of desired material from the area stripped. It was known that the water was near the surface of the ground in the area under consideration and that some of the material would have to be obtained from below the surface of the ground water. From defendant's standpoint such an operation was not objectionable as it would produce material for placement on the dam, having at the time of its excavation a higher moisture content and therefore nearer the optimum moisture content for compaction.

25: In view of the above circumstances, before any stripping of the area in question was undertaken, the defendant's field engineer, J. R. Walton, consulted plaintiff's superintendent, B. H. Stewart, as to the feasibility of the use of the area, pointing out the area to Stewart and asking him to inspect it.

26. As a result of such conferences, it was determined to proceed with borrow operations in the areas in question which are shown upon defendant's Exhibits 1A and 1C and described as Areas A to G, inclusive. The areas were staked out by the defendant and stripped by the plaintiff preliminary to borrow excavation.

27. The access to Area A from the haul road in use by the plaintiff passed over a depressed area of some 300 to 400 feet. To construct the road over this depressed area, plaintiff used material from the stripping operations and later placed thereon some 2,433 cubic yards of gravel.

28. On about September 26 borrow operations were begun by the plaintiff in Area A, using a dragline and Euclid trucks. On this day excavation was attempted of material from a depth of over 2 to 4 feet below the surface of the ground water. This resulted in a very wet condition at the site of excavation from leaking water brought up with the bucket and spilling on the ground from the bucket and the trucks. As the trucks proceeded with their loads over

the newly constructed haul road to the fill constructed through the depressed area, water seeping from the wet material in the trucks onto the uncompacted fill soon brought about a very wet condition on the fill which made hauling conditions very difficult and expensive.

29. On the afternoon of September 28 Mr. Wunderlich had come to the job site and robserving operations in Area A and on the access road, ordered the dragline out of this area and back to the main part of Borrow Pit No. 1 at about seven o'clock in the

evening.

Two or three days later the dragline was returned to its operations in the lower ground and continued excavation therefrom until about 100,000 cubic yards of borrow from this area had been excavated and hauled to the embankment. The greater part of this yardage was obtained from areas other than Area A, access to which was by a road other than that constructed by the plaintiff as above described. For a time empty trucks returning from the embankment were routed over the fill and succeeded in compacting it so that it could later be used without undue hardship. Operations in Areas A to G, inclusive, were conducted over the period from September 26, 1939, to October 31, 1939.

30. The excavation from Area A on or about September 28, 1939, amounted to 4,960 cubic yards. Due to the circumstances above outlined, these operations were attended with considerable difficulty and expense. The remaining part of the yardage excavated from the low area was accomplished without undue difficulty. Plaintiff had conducted excavation of similar materials during 1938 near the river and at times from the bed of the river without undue difficulty. The difficulties occasioned plaintiff in Claim No. 1 did not result chiefly from the operation of excavation but from the hauling of material from which water seeped over the roads which were not

"all weather roads."

31. Plaintiff states that throughout the operations involved in Claim No. 1, it protested orally that the work was beyond contract requirements and requested written orders therefor; and that defendant's construction engineer declined to issue written orders on the ground that the work was within contract requirements and no written orders in such case were contemplated by Para-

graph 14 of the specifications. During the progress of the work plaintiff made no written protest nor did it bring to

the attention of the contracting officer, S. O. Harper, its contention that the work exceeded contract requirements and that the construction engineer had declined to issue written instructions.

The operation in Areas A to G was undertaken by the plaintiff in the belief by its Superintendent Stewart that the operation was feasible. No undue difficulty or expense attended the excavation of any of the involved yardage except that excavated from Area

A on or about the 28th of September 1939.

32. Plaintiff's actual extra costs under Claim No. 1 are not sufficiently established by the evidence. Plaintiff claims that the construction engineer, Charles A. Burns, agreed at one time to recommend the allowance of \$6,000 on this claim. The construction engineer, as plaintiff knew, was without authority to allow extras and his offer was not based on an analysis of the costs involved.

It was not until December 11, 1939, nearly 2 months after the work was performed, that plaintiff addressed to the contracting officer a written protest and claim for additional cost of work involved in Claim No. 1. This was the contracting officer's first written notification from plaintiff of an objection to the performance of the work.

### Claim No. 2

Claim for rehandling stockpile material from cut-off trench

33. In the spring of 1939 the construction of embankment from the diversion channel to the left abutment was lagging behind the section to the right of the diversion channel and the construction engineer directed that the left side of the embankment be brought up to the level of the right-hand side. Before the contractor could place embankment on the left side of the dam it was necessary to excavate and backfill the cut-off trench on that side. A start on this work had been begun the preceding fall.

34. Excavation in the cut-off trench on the left side of the embankment was conducted by plaintiff from April 9 to April

20, 1939. The materials coming from the cut-off trench at this time consisted of glacial till suitable for use in Zone

No. 2 of the embankment but contained a quantity of oversized stones. The specifications required that this material be screened and all stones of plus 2½ inch size be removed before the material was placed on the embankment. Previously the construction engineer had relaxed the specification requirements to allow the placing in Zones No. 1 and No. 3 of the embankment material containing oversized stones and the removal of such stones on the embankment by means of a rake dozer. This method was not very satisfactory and was never allowed with respect to the placing of Zone No. 2 material.

35. The separation or screening plant had been located by the contractor on the right abutment at the farther end of the dam.

The previous fall after freezing weather had stopped placement of material on the dam embankment, the contractor, in order to expedite the construction of the spillway, had continued excavation from such area and had stockpiled such material near the screening

plant.

36. From April 9 to April 28, 1939; plaintiff's screening plant was out of order and not in operation. In order not to delay further exeavation of the cut-out trench on the left side of the diversion channel, it was necessary that the materials therefrom, suitable for inclusion in Zone No. 2 of the embankment, be stockpiled until they could be processed at the screening plant. Because the material from the spillway excavation left no room for further stockpiling at the spillway and possible access thereto during April-1939 from the left side of the embankment was less convenient than it would later become, the contractor asked permission to stockpile such material on the left abutment. A point for this purpose was designated by the construction regineer and is shown marked "Claim No. 2" on Defendant's Exhibit C. Drawing No. 191-D-45. The contractor excavated from the cut-off trench and stockpiled in this area approximately 30,000 cubic yards. This stockpile is shown by photographs, defendant's Exhibit 2C, pages 2, 3, 5, 6, and 7.

37. In the fall of 1939 after the left side of the embankment had been brought up to a point approximately level with the toe of the stockpile, the stockpiled material was hauled across

117 the embankment to the screening plant, processed, and placed in Zone No. 2 of the embankment. This disposition of the stockpile was made intermittently over a period of about 50 days, August 21 to October 10, 1939. Its progress is shown on photographs, defendant's Exhibit 2C, page 7.

38. The contractor was paid for the yardage involved in this claim 35 cents per cubic yard. Under the specifications the price for this item covers excavation, separation or screening, and haul-

ing to the embankment.

- 39. It is plaintiff's contention that the yardage involved in this claim was ordered stockpiled because at the time of its excavation it was too wet to be placed in the embankment; that such wet condition rendered the material unsuitable for use in the embankment and that it should have been wasted. It therefore claims that the requirement that unsuitable material be rehandled from the stockpile, screened, and hauled to the embankment constituted an extra beyond contract requirements.
  - 40. Paragraph 43 of the specifications reads in part as follows:
  - <sup>a</sup> 43. Open cut excavation, general.—Except as otherwise provided in these specifications for definite features of open-cut excavation or as otherwise shown on the drawings, open-cut

excavation will be measured for payment to slopes of 1 to 1 for common excavation and 1/4 to 1 for rock excavation, and, in the case of excavation for structures, to lateral dimensions of one foot outside of the foundations of the structures: Provided. That where the character of the material cut into is such that it can be trimmed to the required lines of the concrete structure and the concrete placed directly against the sides of the excavation, measurement for payment will be made only for the excavation within the neat lines of the structure: Provided, further, That for any required excavation where, in the opinion of the contracting officer, the conditions warrant, the excavation will be measured for payment to the most practicable dimensions and lines as staked out or otherwise established by the contracting officer; Provided, further, That for trenches for pipe drains, except toe drains for the dam embankment, measurement for payment will be made only to the neat lines required to provide for the thickness of gravel fill around the drain pipes as shown on the drawings or as directed by the contracting officer. Where not to be covered with

concrete, excavations shall be made to the full dimensions required and shall be finished to the prescribed lines and grades in a workmanlike manner, except that sharp points of undisturbed ledge rock will be permitted to extend within the prescribed lines not more than six inches. The contractor shall prepare the foundations at structure sites in a manner suitable for forming foundations for the concrete structures. The bottom and side slopes of common excavation upon or against which concrete is to be placed shall be accurately finished by hand to the dimensions shown on the drawings or prescribed by the contracting officer, and the surfaces so prepared shall be moistened with water and tamped or rolled with suitable tools or equipment for the purpose of thoroughly compacting them and forming firm foundations upon or against which to place the concrete structures. If at any point in common excavation, material is excavated beyond the neat lines required to receive the structure, the overexcavation shall be filled with selected materials, in layers not more than six inches thick, moistened and thoroughly compacted by tamping or rolling in a manner satisfactory to the contracting officer. If at any point in common excavation the natural foundation material is disturbed or loosened during the excavation process or otherwise, it shall be consolidated in a manner satisfactory to the contracting officer, or, where directed by the contracting officer, it shall be removed and replaced with selected material compacted to the satisfaction of the contracting officer. Where concrete is to be placed upon or against rock, the excavation shall be sufficient to provide for the minimum thickness

of concrete at all points, and the prescribed average thickness shall be exceeded as little as possible. Measurement of such excavation for payment will be limited to the excavation required for the prescribed average thickness of the concrete for which measurement for payment will be made as provided ... in these specifications. Any and all excess excavation or overexcavation performed by the contractor for any purpose or reason, except as may be ordered in writing by the contracting officer, and whether or not due to the fault of the contractor, shall be at the expense of the contractor. No blasting that might injure the work will be permitted, and any damage done to the work by blasting, including the shattering of the material beyond the required excavation lines, shall be repaired by and at the expense of the contractor and in a manner satisfactory to the contracting officer. All cavities in ... rock excavations upon or against which concrete is to

be placed, caused by careless excavation, as determined by the contracting officer, or by removal, as directed by the contracting officer, of rock or other foundation materials needlessly damaged by blasting or other operations of the contractor, shall be solidly filled with concrete entirely at the expense of the contractor, including the cost of all materials required therefor. Insofar as practicable, as determined by the contracting officer, all suitable materials from required excavations shall/be used in the embankment or in structure backfill: Provided, That all suitable materials from common excavation for the diversion channel, downstream portion of the spillway, outlet works, cut-off trench, toe drains, and from the cebble borrow pits shall be separated into material 21/2 inches or more in diameter and material less than 2½ inches in diameter as provided in paragraphs 45, 46, 47, 48, and 52. The contractor shall be entitled to no additional compensation above the unit prices bid in the schedule for the excavation, embankment, and backfill, due to the necessity for rehandling. any materials which, on account of orders of the contracting officer or for any other reason, are laid aside in temporary storage piles prior to transporting to embankment or backfill. Except as otherwise provided in paragraph 46, the unit prices bid in the schedule for excavation shall include all costs in connection with separating the materials into sizes, where required, and the temporary and permanent disposal or wasting of the materials excavated: Provided, That all materials actually placed in the embankment or in structure backfill will again be included for payment under appropriate items of the schedule for embankment or backfill. Except as otherwise provided in paragraph 39 for diversion and care of river during construction and unwatering foundations, the unit prices

bid in the schedule for excavation shall include the cost of all labor and materials for cofferdams and other temporary construction and of all pumping, bailing, draining, and all other work necessary to maintain the excavation in good order during construction and of removing such temporary construction where required.

41. Paragraph 54 of the specifications provides in part as follows:

-54.—Embankment construction, general.—For the purposes of these specifications, the term "embankment" includes the earth-fill portion of the dam, the cobble and sluiced gravel-fill at the downstream toe of the dam, the cobble and rock fills on

the slopes of the dam, and the rip-rap on the upstream

120 face of the dam. The embankment shall be constructed to the lines and grades established by the contracting officer, which, in general, will be the lines and grades shown on the drawings, increased by such heights and widths as may be determined by the contracting officer to be necessary to allow for settlement. No brush, roots, sod, or other perishable or unsuitable materials, as determined by the contracting officer, shall be placed in the embankment. The suitability of each part of the foundation for placing embankment materials thereon and of all materials for use in the embankment construction will be determined by the contracting officer. material shall be placed in the embankment when either the material or the foundation or embankment on which it would be placed is frozen. The contractor shall maintain the embankment in a manner satisfactory to the contracting office urtil the final completion and acceptance of all of the work under the contract. Each portion of the embankment shall be constructed in accordance with the specifications therefor, including the provisions of this paragraph. All portions of the required embankment, whether constructed of materials excavated for other required parts of the work or from borrow pits will be measured and paid for in embankment, after compacting if required, which payment will be in addition to the payment made for the excavation, separation, and transportation of the required materials, and shall include the cost of rehandling materials taken from required excavations and deposited temporarily in storage piles, and placing the materials as herein specified. It may be feasible to transport a large portion of the materials which are excavated for other required parts of the work and which are suitable for embankment construction, directly to the embankment at the time of making the excavation, but the contractor shall be entitled to no additional compensation above the unit prices bid in the schedule for excavation and embankment by

reason of it being necessary or required by the contracting officer, for any reason, that such excavated materials be deposited in temporary storage piles prior to transporting to the embankment.

42. Stockpiling of the yardage involved in this claim was conducted for the reasons outlined above and not because the material was too wet for placement in the embankment at the time exca-

vated. During the process of stockpiling plaintiff's superintendent Stewart asked for, and received, partial payment

of 20 cents per cubic yard for the material excavated and stockpiled. This 20 cents was understood to be a portion of the 35-cent unit price covering excavation, screening, and hauling to the embankment.

- 43 Plaintiff claims under this item \$36,610.79. In said amount was included the cost of screening, and other costs predicated upon the schedule of equipment rental rates which plaintiff says were agreed to by construction engineer Burns. Burns had no authority to use any schedule of equipment rental rates other than the schedule promulgated from and issued by the Office of the Chief Engineer of the Bureau of Reclamation in Denvér. The rates used by plaintiff in its claim are in excess of such rates and the weight of the evidence fails to show any agreement to plaintiff's rates by Burns.
- 44. Plaintiff's costs of rehandling this stockpiled material, exclusive of any cost for hauling it to the screening plant, screening and rehauling to the embankment, all of which vere required under item 11 of its pay schedule, were \$5,370.08, and consist of the fellowing items:

Labor	Hours	Rate	Amounts
Lorain shovel operator. Lorain shovel oiler. Truck operators (waiting for load).	291.5	\$1.50 .80 .80	\$447.75 233.20 238.80
Pay-roll insurance and taxes at 9.85%			919.75 90.60
Total labor cost			
Lorain shove No. 77. Euclid trucks, 12 cu. yd. (reloading time)	298.5 298.5	7.83 5.14	2,337,25 1,534,29
Total costs			4,881.89 °488.19
Total			5,370.08

### Claim No. 3

For rehandling material excavated from outlet works:

45. During September and October 1938 plaintiff was excavating from the bottom of the open cut for the outlet conduit. This conduit was to rest on bed rock and seepage along the surface of this bed rock had rendered the material being excavated too wet for placement on the embankment. The material was glacial

till.

46. The contractor was directed by the defendant's engineers to place this material in the reservoir area upstream from the dam and on the left of the inlevenance leading to the outlet works. Defendant's instructions do not appear to have been specific or definite as to the purpose of this placement or the material and plaintiff was under the apprehension that such placement constituted a waste of the material and was for the purpose of forming a blanket in the area of deposit. A blanket had previously been constructed at a similar location near the left at atment of the dam. Plaintiff deposited the material in "windrows" and later in the summer of 1939, after it had dried out, leveled these windrows with a bulldozer.

47. In the fall of 1939 the defendant's engineers tested the gnaterial in question for moisture content and found this suitable for placement in the dam. The plaintiff objected to the second handling of this material and the defendant agreed to have such material moved to a V-shaped depression between the blacket near the toe

of the dam and near the left abutment.

48. The total yardage excavated from the outlet works and involved in this claim was 7,207 cubic yards; 5,241 cubic yards were moved to the Y-shaped depression. Thereupon the defendant ordered plaintiff to move the remaining 1,960 cubic yards, process

it at the screening plant, and place it on the dam.

49. Plaintiff claimed that all of the yardage involved had been wasted to form the blanket and protested against the second handling of such yardage. It filed a claim for such work as an extra in the sum of \$5,078.49. After negotiations the defendant issued work order No. 6, December 18, 1940, allowing pay at an additional 35 cents per cubic yard for the 5,241 cubic yards moved to the V-shaped depression. The defendant declined to pay the additional sum for the removing of the 1,966 cubic yards removed

to the embankment after screening.

 Extra work order No. 6 contained the following paragraph:

As the work was not provided for in the schedule of bids, you will be compensated in accordance with paragraph 10 of Specification No. 705.

Sec. 30 of the specifications is as follows:

30. Right to change location and plans.-When additional information regarding foundation or other conditions becomes available as a result of the excavation work, further testing, or otherwise, it may be found desirable to change the location, alinement, dimensions, or design of the dam or appurtenant works to conform to such conditions. The Government reserves the right to make such reasonable changes as, in the opinion of the contracting officer, may be considered necessary or desirable, and the contractor shall be entitled to no extra compensation because of such changes, except that any increase in the amount of excavation, concrete, or other required work, for which items are provided in the schedule, will be paid for at the unit prices bid therefor in the schedule. The contractor's plant shall be laid out and his operations shall be conducted so as to accommodate any reasonable change in the location and design of the dam and appurtenant works, or any part thereof, without additional cost to the Government.

Since under the language of Sec. 30 the contracting officer's justification for payment of the yardage moved the second time to the "V shaped" depression could not rest upon the consideration that such place of deposit represented a new and different design, its justification must rest on the ground that the material had come finally to rest in the blanket. In this view, the yardage moved the second time to the dam is likewise entitled to a second payment at the rate allowed in Extra Work Order No. 6. This amount would be 1,966 × \$0,35 or \$688.10.

50. Plaintiff's costs of rehandling 1,966 cubic yards of this material, exclusive of any costs for hauling it to the screening plant, screening and rehauling to the embankment, all of which were required under Item 9 of its pay schedule, were \$248.70, and consist of the following items:

The sound of the following recting.		Part of the second	
	Hours	Rate	Amounts
Dragline operator	21	\$1.50	\$32.25
Dragline oiler	21.5	.80	17.20
Lorain, 77 shovel operator	21.25	1.50	31.88
Lerain 77 shovel oiler	20.25	.80	16.20
	42.75	.80, .	, 33.49
			130.93
Pay-roll insurance and taxes at 9.85%	10	VI ALTE	12.90
		0	12.30
Total labor costs		,	143.83
Equipment •			
Lima d'agline No. 901	21.5	13.87	*298.20
Lorain No. 77 shovel		7.83	168.34
	42.75	5.14	219.73
Total cost for schoolling 7 207 on side			000 60

The cost of rehandling 1,966 cubic yards at 11½ cents per cubic yard is \$226.09; plus 10 percent for overhead and profit of \$22.61, totals \$248.70.

#### Claim No. 4

Cost of Excavating cut-off trench deeper and to steeper slopes than originally staked or shown on plans

51. Plaintiff claims cost for excavating the cut-off trench between approximate dam axis stations 6 + 00 and 7 + 75 from the left abutment as an extra item, under paragraph 10 of the specifications.

Plaintiff contends that it was required to perform this work by excavating at much steeper slopes than that required in the specifications and that it was hindered and delayed in its performance by reason of the necessity of excavating this material in the confined area of the cut-off trench as deepened.

52. The contract specifications provide in part as follows:

43. Open-cut excavation, general.—Except as otherwise provided in these specifications for definite features of open-cut excavation or as otherwise shown on the drawings, open-cut excavation will be measured for payment to slopes of 1 to 1 for common excavation and 1/4 to 1 for rock excavation, \* \* \*

Provided further, That for any required exeavation 125 where, in the opinion of the contracting officer, the conditions warrant, the excavation will be measured for payment to the most practicable dimensions and lines as staked out or otherwise established for the contracting officer;

The contemplated alinements and cut-off trench.

The contemplated alinements and cross-sectional dimensions of the trenches are shown on the drawings, but the alinements and dimensions shown will be subject to such changes as may be found necessary by the contracting officer to adapt the toe drains and cut-off trench to the conditions disclosed by the excavation, and the contractor shall be entitled to no additional allowance above the unit prices bid in the schedule for excavation for embankment toe drains and cut-off trench on account of such changes. Accurate trimming of the slopes of the trenches will not be required but the trenches shall conform as closely as practicable to the lines and grades shown on the drawings or established by the contracting officer.

Plaintiff was paid for the actual excavation involved in deepening the cut-off trench 35 cents per cubic yard, as provided for under

Item 11 of its contract pay schedule.

53. Contract drawing No. 191-D-46 provided for installation of a cut-off wall within the cut-off trench from the left abutment of the dam to approximate axis station 4 + 75, or such terminal as directed by the contracting officer. This cut-off wall was required to be anchored in bedrock a minimum of three feet.

Contract drawing No. 191-D-44 shows the approximate slope of the bedrock under the axis of the dam extending from both right and left abutments, where cut-off walls were required. This drawing also reveals analyses of underlying material in the construc-

tion area by test pits and drill holes at various places.

54. In stripping the area adjacent to the left abutment a large quantity of pervious sand was encountered, which extended upstream from the toe of the dam and had to be removed and wasted. Considerable seepage was encountered between the pervious stratum of sand and the underlying glacial till. This water came from the reservoir created by the cofferdam which had been constructed im-

mediately above this area.

126 For this reason the defendant determined to extend the concrete cut-off wall from the left abutment toward the center of the dam or to approximate axis station 7 + 50, where test pit No. 12 had been excavated. Test pit No. 12, represented on contract drawing 191-D-44, indicated that bedrock would be encountered at a depth of approximately 7,528 feet elevation, or approximately 7,528 feet elevation, or approximately 7,528 feet elevation.

mately 60 feet below the ground surface.

55. The proposed extension of the cut off wall was approximately 275 feet within the cut-off trench.

The area of the primary cut-off trench which required deepening to bedrock for the construction of the contract off wall was approximately 225 feet in length. The surface grade of this terrain was approximately 7,597 feet elevation at approximate station 4 + 75, where the terminal of the cut-off wall was designated on the contract drawing 191-D-44, 7,588 feet at approximate station 7 + 50, where test pit No. 12 was excavated, and 7,554 feet elevation at approximate station 9 + 50 where test pit No. 11 was dug on the left of the river channel. The river channel itself was at approximate station 11 + 00 with elevation of 7,550 feet.

Test pit No. 14, downstream from the axis of the dam at approximate station 5 + 00, and drill hole No. 15, upstream from the axis and in the approximate line of the cut-off trench, indicate bedrock at approximate elevation 7,550 feet, or 40 feet below the surface. This is about 25 feet beyond the original terminal of the cut-off wall. This bedrock was indicated to follow generally the contour of the surface ground, but sloping from a relatively higher elevation near the surface of the ground at the left abutment to a much

lower level toward the river. While test pit No. 12 indicated bedrock at approximate elevation 7,528 feet, test pit No. 11, which was dug some 200 feet further toward the river channel and to a depth of approximately 7,505 fect elevation, did not encounter any bedrock.

56. The cut-off trench was originally staked out by defendant's engineers to end the cut-off wall on bedrock at approximate axis station 4 + 75, as shown on drawing 191-D-46, or approximately 40 feet below ground elevation at the terminal of the wall. For

the reasons stated above the construction engineer directed plaintiff to deepen the cut-off trench down the contour of the rock to the newly designated terminal of the cut-off wall at approximate station 7 + 50.

Plaintiff eperformed this excavation, deepening the trench to a point keyond the newly designed terminal of the cut-off wall, and the plaintiff did not protest the performance of this work as directed.

57. The cut-off trench was excavated to approximate elevation 7.528 feet or 60 feet below the ground surface in the area of test pit No. 12, but bedrock was not encountered, although some large boulders were discovered, which may have been erroneously interpreted as bedrock in the contract drawing. Plaintiff's superintendent then protested to defendant's representatives orally and objected to further excavation for bedrock. The material encountered was a conglomerate of glacial till, embedded with boulders and very tightly cemented. It was impervious and suitable for the foundation for embankment-fill, except that the concrete cut-off wall had to be anchored into solid rock. Some of this material. became excessively wet and soupy and was wasted. Part of it was stockpiled at the left abutment below the axis of the dam and was the subject of rehandling under Claim 2. It could be excavated with a dragline only with difficulty, and plaintiff used a shovel, which loaded the hauling equipment from the rear because of the confined area of the work.

58. Plaintiff was directed to continue the excavation and was told that bedrock should be encountered within a few feet of elevation 7,528 feet, based on the assumption that the slope of the bedrock would not vary greatly from the grade encountered toward the left abutment between approximate axis stations 3+50 and 5+50. Plaintiff continued the excavation in shallow lifts of about two feet to approximate elevation 7,524 feet within the extended area of the trench, without encountering any bedrock. The Government engineers then dug a test pit about 3 feet deeper in the deepest part of the excavation but found no bedrock.

Defendant's construction engineer then directed plaintiff to level off the trench foundation and prepare this area for backfill with impervious material. It had been excavated to approximate elevation 7,522 to 7,524 feet in the extended area about 175 to 200 feet in length. The foundation area of the cut-off trench which continued toward the river channel was much higher, except in the area of test pit No. 11 which had to be excavated and timbers removed to the full depth of the test pit and the drift or tunnel extending some 40 feet toward the river channel from this test pit.

Plaintiff was required to excavate a small drain trench along the upstream side of this deepened portion of the cut-off trench, and place drain tile embedded in gravel in order to properly drain the foundation area. This tile system drained into a sump where it was pumped out and was later refilled with grout through connecting risers, after the foundation fill had been placed. This tile drainage

is the subject of claim 6 herein.

59. After this excavation was performed it was discovered that the bedrock continued at a much steeper grade from approximate axis stations 5+50 to 6+22. At the latter point it came to an abrupt drop, and the cut-off wall was terminated here, at approximate elevation of 7,524 feet, with an extension of about 147 feet

from the original terminal.

60. In view of the showing revealed by the log of test pit No. 12 on drawing 191-D-44, it was reasonable for the defendant to anticipate bedrock at elevation 7,528 feet at this point, with a gradual rise in the slope of the bed rock to approximate elevation of 7,550 feet some 250 feet toward the left abutment. Having discovered the unreliability of the information from test pit No. 12, after deepening the trench to elevation 7,528 feet, the composition of material below this elevation and the location of bedrock in this area were unknown to either the defendant or plaintiff, and further excavation in this area became exploratory.

This excavation was performed with steep side slopes, as much as 0.3 to 1, rather than 1 to 1 as specified. Yardage was not measured for payment at 1 to 1 grade. It consisted of tightly compacted material and the slopes stood firm, but it was more difficult to remove. The width of the bottom of the trench, as deepened, was from 16 to 26 feet. Excessive seepage accumulated in this low area and it was more difficult to drain. Muddy areas could not be pumped out, but had to be scooped up and hauled out in small

quantities. This deepening operation was performed during the last half of May and the first part of June 1939. It held

up plaintiff's embankment placement operations, and its

entire operations were delayed.

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61. On July 12, 1939, plaintiff submitted its claim for additional work between stations 6 and 8 from the left abutment, after the cut-off trench had been excavated as staked by the defendant and in accordance with the original plans. Defendant does not contest

the correctness of this statement, except as to rental rates applied for equipment used. This claim is based on actual labor costs, equipment rental and ten percent for overhead and profit in accordance with paragraph 10 of the specifications. The claim was restated from time to time, and was included with other exceptions to the final pay youcher on March 14, 1942.

In his findings and decision of December 29, 1942, the contracting officer denied plaintiff's claim in toto; finding that plaintiff failed to make its objections and protests of record in the manner and time limits required, and that changes made by the Government were in accordance with the specifications; that it was the responsibility of the contractor to properly unwater the construction area, and that the contracting officer is prohibited from making any additional payment for increased costs on account of excavating wet material.

The findings and decision of the contracting officer were affirmed by the Secretary of the Interior upon appeal by plaintiff.

62. Plaintiff's engineer computed the yardage involved in deepening the cut-off trench between the axis station 6+00 and 8+00 and 9+50 to 10+00, in the amount of 6,095 cubic yards.

The excavation performed in the area between stations 9+50 and 10+00, adjacent to the river channel, was carried to the full depth of test pit No. 11, and the lateral drift extending about 40 feet toward the channel. It required the removal of timbers from this test pit, the excavation of overlying materials above the drift or tunnel, and backfilling the pit and excavation with impervious materials.

Drawing 191-D-44 shows test pit No. 11, with the drift excavated from the pit toward the channel, all of which had to be cleared and refilled. Test pit No. 11 was about 50 feet

deep, extending to approximate elevation 7,505. This area was excavated and backfilled in the fall of 1938. There is no evidence that the side slopes of this excavation were steeper than that specified. This excavation was not involved in the area complained of. The deepening of the cut-off trench for the extension of the cut-off wall was some 200 to 400 feet nearer to the left abutment.

Plaintiff concedes that it was paid for 6,095 cubic yards at the rate of 35 cents per cubic yard under item 11 of its pay schedule for actual excavation in deepening the cut-off trench with steeper side slopes than that specified for open-cut excavation.

The c dence is not sufficient for a determination of the total excavation involved in deepening the cut-off trench between stations 6+00 and 8+00 for the extension of the cut-off wall to bedrock. That portion involved in continuing the deepening process below elevation 7,528 down to 7,522 feet elevation was only 815 cubic yards.

The evidence does not disclose what the yardage would have been by measurements of the actual depth on a 1 to 1 slope.

63. Plaintiff's costs of exeavating and hauling materials by deepening the cut-off trench between axis stations 6+00 and 8+00 for the purpose of extending the cut-off wall, after the trench had been excavated to the depth and grades as originally staked, were \$5,859.02, and consist of the following:

	Labor Pay roll insurance and taxes				\$1,129.54 98.42
	Total labor cost		×1		1,227.96
	Equipment rental	Values	Hourly	Hours engaged	. 9
	Lima shovel #901, 2½ cy Lorain shovel #77, 1½ cy	34,225 9,200	11.49 7.83	115	1,321.35 62.64
	RD #8 tractor, 95 hp	7,905 9,887	4.06	. 86.5 48	351.19 233.76
	RD #8 tractor & Athey wagon of 18 cy Euclid truck, 8 cy	12,355 7,850	5.71	18 535	102.78 1,872.50
	Euclid truck, 12 cy	12,750	5.14	o 30	154.20
	Total equipment cost				4,098.42
-	profit, at 10 percent of other costs	.0			532.04
	Total cost				5,859.02

13 Plaintiff was paid at the rate of 35 cents per cubic yard under item 11 of its contract pay schedule for 6,095 cubic yards which it computed in deepening the cut-off trench in this area, amounting to \$2,133.25.

Plaintiff's excess cost in performing this work was \$3,725.77, or

\$.611 per cubic yard.

If plaintiff is entitled to extra compensation for only the yardage below elevation 7,528, the amount would be 815×\$.611 or \$497.97.

### Claim No. 5

Cost of widening spillway for change in location of sewer pipe drains

64. In May, 1939, written orders were issued directing plaintiff to perform additional excavation to place sewer-pipe drains along the outside edge of wall footings in lieu of constructing them along the spillway side-wall footings above the cantilever base, as provided in the contract specifications, and that payment would be made at the contract unit price.

This work was performed by plaintiff, as directed, and on July 12, 1939, it submitted a claim under paragraph 10 of the specifications, in the sum of \$3,829.30. At a conference held in the office of the Chief Engineer in Denver on August 27, 1940, the contracting officer decided that this claim resulted from a change in plans

and that the contractor was entitled to be paid an equitable price therefor.

Order for changes No. 5, dated April 12, 1941, was transmitted to plaintiff on May 22, 1941, providing in part as follows:

(a) Excavating spillway to additional width between stations 14 + 50 and 19 + 00 on left side and between stations 17 + 04 and 18 + 57 on right side, to permit placing sewer-pipe drains outside of wall footings for the lump sum price of \$2,450.

This amount was approved by the contracting officer in his decision of December 29, 1942, and was not appealed by plaintiff.

Plaintiff now claims the sum of \$2,450, and states that it declined to accept the order for change No. 5 for the reason that its original claim included its sub-contractor's claim for additional gravel, which was later settled. Defendant does

not contest this claim.

# Claims Nos. 6 and 10

Claims for cost of constructing drainage systems for unwatering cut-off trench on the left abutment

65. These claims are considered together since they both involve measures adopted to unwater the cut-off trench near the left abutment prior to refilling it with impervious material.

The area of the cut-off trench requiring drainage involved herein is the same portion of the trench requiring deepening for changes in the cut-off wall under Claim 4. The evidence set forth under Claim 4, with respect to excessive seepage, sand excavation and deepening of the cut-off trench, will be considered also in connection with these claims.

Plaintiff claims that the placement of tile drainage required to properly unwater this area was extra work for consideration under paragraph 10 of the specifications. Claim 6 covers tile drainage placed and embedded in a small gravel filled trench in the bottom of the cut-off trench between approximate axis stations 6 and 8, for which plaintiff claims \$2,529.59.

Claim 10 covers the excavation of a small trench and placing of tile embedded in gravel between approximate axis stations 5+00 to 8+75, for which it claims extra costs of \$2,750.28. In addition to these costs, plaintificalisms refund of material used in these drains which had been originally furnished by the Government but charged back to plaintiff in its final voucher in the sum of \$398.53.

66. The contract specifications provide in part as follows:

39. Diversion and care of river during construction and unwatering foundations.—The contractor shall construct and maintain all necessary cofferdams, channels, flumes, and/or

other temporary diversion and protective works; shall furnish all materials required therefor; except, the metalwork and cement for the log-crib drop as provided in paragraph 25, and shall furnish, install, maintain, and operate all necessary pump-

ing and other equipment for unwatering the various parts of the work and for maintaining the foundations, cut-off trenches, and other parts of the work, free from water as required for constructing each part of the work. \* \* \* The cost of furnishing all labor, equipment, and materials for constructing cofferdams, channels, flumes, or other diversion and protective works, removing or leveling such works where required, diverting the river, maintaining the work free from water as required, disposing of materials in the cofferdams, maintaining the diversion channel and log-crib drop, and of all other work required by this paragraph, except the excavation and refill in the diversion channel, the construction of the logcrib drop, and placing the riprap in the diversion channel, shall be included in the lump sum price bid in the schedule for diversion and care of river during construction and unwatering foundations:

43. Open-cut excavation, general. \* Except as otherwise provided in paragraph 39 for diversion and care of river during construction and unwatering foundations, the unit prices bid in the schedule for excavation shall include the cost of all labor and materials for cofferdams and other temporary construction and of all pumping, bailing, draining, and all other work necessary to maintain the avation in good order during construction and of removing such temporary construction where required.

55. Eart Ofill in embankment.—The earth-fill portion of the embankment shall be constructed to the lines and grades shown on the drawings or established by the contracting officer. All portions of test-pit and cut-off trench excavation within the area to be covered by the embankments and below the required . . stripping lines for the embankment foundation shall be filled. with compacted material as herein specified for earth fills and shall be considered as parts of the earth fill.

(a) Preparation of foundations.—No material shall be placed in the earth-fill portion of the dam until the foundation therefor has been unwatered and suitably prepared and has been ap-

proved by the contracting officer. \* \*,\*

(g) Tamping.—Portions of earth fill between rock projections on the dam abutments, rear gut-off walls and other contracting officer cannot be compacted properly by the use of rolling equipment shall be thoroughly compacted by the use of mechanical tampers.

67. Plaintiff was paid the lump sum of \$15,000 under Item 1 of its contract payo schedule for the diversion and care of the river during construction and unwatering foundations for construction.

The springs or seepages were first encountered in this area at approximate elevation 7,550 feet between the previous sand, involved in Claim 20 herein, and the glacial till and other impervious material which was excavated considerably deeper in this area for the purpose of extending the cut-off wall from the left abutment. The drainage system constructed at this elevation is known as the upper drainage system.

The second pronounced seepage or series of springs was encountered at or near the bottom of the cut-off trench as deepened in the area of axis stations 6 to 8, at approximate elevation 7.522. The lower drains were those placed in the bottom of the trench, and the upper drains represent the system which was placed at approximate elevation 7,550 feet, after the trench had been refilled with about 30 feet of impervious material. Both systems were in the same area The lower drain was constructed within a of the cut-off trench. trench 1.2 feet deep and approximately 1 foot wide at the bottom with a flare to 11/2 feet at the top. This trench was partially filled with screened gravel upon which a 4-inch drain tile was placed with open end joints, and around which additional gravel was packed. covering the top of the drain tile. Waterproof tar paper was placed over the top of the entire drainage trench in order to withhold any. fine materials which might be compressed into the gravel bed when the embankment material was placed.

68. There were approximately 210 feet of this type of drainage placed along the upstream side of the bottom of the trench between approximate station 6+30 and 8+40, with an extension of trench-filled gravel for about 50 feet further to approximate station 8+90. There was also placed at the bottom of the downstream side of the

trench about 40 feet of a similar tile drain between stations 7+05 and 7+45 with an extension of about 25 feet of gravel-filled trench to about station 7+70. A 3-inch metal pipe was placed across the trench, connecting the downstream drain with the upstream drain.

A 4-inch tile drain was built across the bottom of the trench from the lower to the upstream side, connecting with the upstream drain at approximate station 6+30 and immediately below the termination of the cut-off wall.

A concrete sump was installed about midsection in the upstream drain. A galvanized iron corrugated pipe, commonly used for culverts, was placed vertically in this concrete sump. The drainage water was pumped out through the corrugated pipe housing from the concrete base of the sump. There were also installed twelve 1½-inch galvanized pipe risers with connections to the tile drain at various points throughout the system and leading up through the fill to be placed. These galvanized pipes were installed for the purpose of filling the drainage system with sand and cement grout which was forced through the galvanized pipes by pressure into the tile drain and out through the open joints, thus effectively sealing the drainage structure against pepage into the embankment. This grouting was performed only after the trench had been filled with impervious material to a depth of approximately 30 feet.

69. The upper system of drainage was constructed at about an elevation of 7,550 feet. The construction was similar to the tile embedded in gravel in the lower system, except that the small trenches were about 21/2 feet deep; 2 feet wide at the bottom and 4 feet wide at the top, and both 4 and 6 inch tile was employed in. this system. This drainage system was constructed only on the upstream side of the trench. It contained one concrete base sump and twelve 11/2-inch pipes connecting the drain for the purpose of grout filling. This upper drainage system extended for about 500 feet between approximate axis stations 5+00 to 8+75. It was constructed generally much more distant from the center of the trench, starting about 20 feet from the cut-off wall at approximate station 5+00, and thereafter bearing to the right and away from the cut-off wall, and finally terminating in a large semi-circle extending upstream and away from the trench approximately 200 feet.

After additional embankment was placed approximately 35 feet above the upper drain, grout was similarly forced into this system of drainage through the 1½-inch grout pipes and through the open-end tile joints into the gravel fill of the drainage trench.

70. When defendant's engineers suggested these tile drainage systems plaintiff protested the installation of this type of system as being unnecessary and much more expensive. Plaintiff contends that it did not contemplate the use of any tile drainage system in unwatering the construction foundations, but that drainage would have been accomplished by open ditches to sumps. However, plaintiff has not explained how the use of open ditches and sumps would have enabled it to place the fill in area "free from water." The defendant's representatives advised Martin Wunderlich that an accurate record of the cost of installing these drainage systems would be kept and that should the contracting officer later decide that this work involved an extra item it would be paid for by

the Government. Plaintiff was advised by the construction engineer

that payment would be recommended by him.

71. All materials required for the construction of these drainagesystems other than the gravel, were furnished by the Government. Government engineers specified the location and grades where the tile drainage would be placed and staked out the area for its construction.

The contracting officer did not issue any written order directing plaintiff to perform this drainage and plaintiff made no written protest until July 12, 1939, after the work had been completed.

The drainage system at the bottom of the cut-off trench was started about June 9, 1939, after Government engineers terminated the deepening operation for the purpose of locating bedrock in order to extend the cut-off wall in this area. The lower drainage system was completed and 30 feet of embankment was placed in this area during the month of June 1939. The upper drainage system was substantially less completed by the end of June and the embankment fill above this drainage system was continued in July 1939.

The tile drains were filled with grout and remained in the trench as a permanent addition to the structure. Plaintiff was paid for the labor for the installation of the grout pipes and fittings. It was also paid for the grout which was forced

into these drains and into the gravel fill. It has not been paid for the labor for excavating drain trenches and the installation of the drains. Materials which had been furnished by the Government

ere charged back to plaintiff in its final voucher. .

72. On July 12, 1939, plaintiff submitted claims for extra costs of installing these drainage systems, including labor, gravel, and equipment rental, totaling \$5,279.87. Claim 6 covered its costs for the lower drainage, which was installed in the bottom of the trench as deepened for the extension of the cut-off wall, in the sum of \$2,529.59. Claim 10 covered its costs for the upper drain, which was installed at approximate elevation of 7,550 feet upstream from the primary cut-off trench, in the sum of \$2,750.28.

These claims and others involved in this case were subjects of conferences in January and February 1940, and in later discussions. During a conference in August 1940, plaintiff pointed out that it was the intent of the Government to recognize the cost of installing these drainage systems since the Government had furnished all the materials going into these systems and plaintiff was never involved for the material so used. The construction engineer thereupon decided that, since it was plaintiff's responsibility to unwater the construction area, all materials furnished by the Government would be charged back to it. The value of such materials used in these drainage systems in the amount of \$398.53 was deducted from plaintiff's final voucher in October 1941. Plaintiff thereafter

included in its claims the sum of \$398.53, so deducted. In his findings and decision of December 29, 1942, the contracting officer held that it was plaintiff's responsibility to unwater all construction areas, and that plaintiff was not entitled to recover its costs for this performance. He concluded that no charge should have been made for the pipes and fittings used for grouting the drainage system, which had been paid for, and that plaintiff should be refunded the sum of \$159.43 covering grout pipes and fittings which had been deducted from its final youcher.

The Secretary of the Interior confirmed the decision of the contracting officer July 7, 1943, allowing plaintiff \$159.43 for 38 grout pipes and fittings erroneously deducted from sums

otherwise due plaintiff.

73. Plaintiff was required to unwater foundations in the construction areas, for concrete work and before placing the earth fill portion of the dam. The contract drawings do not specify any tile drainage in the cut-off trenches for this purpose. Drawing 191-D-46 shows only three cross-section specimens of the cut-off trench. Two sections in the middle portion of the dam were specified 20 feet deep, below the stripping line, and a width of 15 feet at the bottom with a grade of 1 to 1. One section is shown in the river channel with a minimum depth of 30 feet below the stripping line and 20 feet wide at the bottom with the same side grades. There was no cross section specimen of the cut-off trench in the area left of the river where the trench had been deepened and the drainage J systems were constructed.

Excavation in this area was approximately 66 feet below the surface, but only about 30 feet into glacial till and boulders. A large pocket of sand was encountered in this area down to approximate elevation 7,550 or 36 feet below the surface, part of which the Government classified as stripping, and which classification plaintiff disputed in its claim No. 20.

The bottom of the trench in this area varied. It was only 16 feet wide at approximate station 7+50, but was 25 feet or more in width at other points throughout its 200 feet length, and substantially wider than the width specified in other areas. Springs encountered in this area were not anticipated by either plaintiff or defendant.

74. The water in the upper level at approximate elevation 7,550, where most of it was encountered, was first diverted from the excavation through open drainage ditches or flumes into the area of the river channel several hundred feet distant, and through this channel to the lower side of the proposed embankment. Of course when the trench was excavated across the river channel, this water had to be accumulated into sumps and pumped outside of the construction area. The excavation for the trench had been considerably widened at this upper elevation, and the drainage ditch

was dug along the upstream side upon a bench away from the excavation of the primary trench.

The seepages in the bottom of the trench were first encountered over the bedrock toward the left abutment, but some was also discovered on the downstream side of the trench toward the axis of the dam. These lower seepages caused considerable difficulty to plaintiff in excavating this area. It was not until plaintiff had completed the excavation and was preparing to place embankments fill that the construction engineer determined that open ditch drainage would not suffice for the unwatering of the foundations for placing embankment. Without unwatering it was impossible to maintain the embankment at optimum moisture for compaction, since the seepages into the bottom of the trench entered at different levels.

Plaintiff was required to use a mechanical tamper over the drain trench for required compaction until the fill was built up to the point where the compaction roller would not damage the drain tile. Mechanical tamping was required around the grout riser pipes and the sump pipe for about 30 feet of fill over the lower drainage system, and about 35 feet over the upper drains, to the terminals of these grout pipes. After the grout was injected into the drains the pipes were sealed over and left in the embankment.

75. Plaintiff's cost for installing the lower drain, including additional pumping, over and above what it would have cost for open ditch drainage along the sides of the trench was \$1,892.98, and consists of the following:

	Hours	Rate	Amounts
Labor	4		\$1.055.04
Pay-roll insurance and taxes			89 14
Gravef at 2.25 per c. v.		P	79 00
Hauling 260' of 4-inch tile			7.80
Equipment rental:			1.00
Lorain No. 40 dragline	26.5	3.67	97.25
12 c. y. Euclid truck	2	-5.14	10.28
8 c. y. Euclid truck	24	3.50	84.00
R. D. No. 8 tractor	4	4.06	16.24
R. D. No. 8 tractor and roller	10	5.110	
Garcher-Denver compressor			
Fairbanks Morse electric pumpo.		1.94	164.90
Lagger gag numn	84	25	21.00
Jaeger gas pump	96	.25	24.00
Pneumatic tampers	201	. 14	28.14
Allowance for overhead and profit at 10%			1 700 00
Allowance for overhead and profit at 10%			1,720.89
Allowance for overhead and profit at 10%			172.09
Total costs			1 892 98

Plaintiff's cost for installing the upper drainage system in a similar manner was \$2,101.46, and consists of the following:

	Hours	Rate	Amounts	
Labor	/		\$771.00	
Pay-roll insurance and taxes				
Gravel at 2.25 per c. y			100 00	
Equipment rental:				
Lima dragline	1	\$13.87	13.87	
Lorain No. 40 dragline		3.67	168.82	
12 c. y. Euclid truck.		5.14	43.61	
S c. y. Euclid truck		3.50	59.50	
LeTourneau carryall		2.77	33.24	
R. D. No. 8 tractor		4.06	48.72	
R. D. No. 8 tractor and dozer		4.87	4.87	
R. D. No. 8 tractor and blade	2.5	5.43	13.57	
R. D. No. 8 tractor and push cart		4.87	14.61	
A-C K tractor and dozer		2.81	11.24	
Gardner-Denver compressor		. 1.94	81.48	
Schram compressor		1.94	56.26	
Barnes pump	. 12	25	3.00	
Ingersol-Rand electric pump	. 88	.25	22.00	
International truck	9.5	1.12	10.64	•
Fneumatic tampers	. 188.5	.14	26.39	+
Total			. 1,910.42	
Allowance for superintendence, general expens	se . '	-		
and profit at 10% of other costs			. 191.04	
Total cost	0		2,101.46	

In addition to the foregoing costs there was deducted from plaintiff's final voucher the sum of \$398.53 for materials supplied by the Government which went into the above drainage systems. Of this sum the contracting officer found that plaintiff was entitled to a refund of \$159.43, representing the deduction for grout pipes and fittings. No refund has been made to plaintiff.

The total extra costs to plaintiff for labor, materials and expense in constructing these drainage systems were \$4,392.97, as follows:

Lower drainage system.						\$1,892.98 2,101.46
Upper drainage system.  Materials furnished by	y the	Gove	rnment	and de	ducted from.	398.53
plaintiff's final vouch	er					000.00

76. The contract specifications provided for the installation of 4-inch tile drains under pay item 27 at 70 cents per linear foot; and 6-inch tile drains under item 26 at 80 cents per linear foot. The contract specifications further provide in part:

25. Materials furnished by the Government.-The Government will furnish cement for use in concrete, mortar, and grout; concrete or clay sewer pipe for drains; The cost of unloading, hauling, storing, and caring for all ma-

terials furnished by the Government shall be included in the prices bid for the work in which the materials are to be used:

60. Drainage, general.—Drains shall be constructed under the downstream toe of the dam, under the floor of the spillway, under the floor of the outlet channel, and elsewhere, as shown on the drawings or as directed by the contracting officer.

of the thickness shown on the drawings or as directed by the Contracting officer shall be placed in the bottom of the pipe trenches. The pipe shall be carefully laid on the gravel bedding with the bell end upgrade and with partially open, uncemented joints, in a workmanlike manner, and to the lines and grades established by the contracting officer. Payment for constructing sewer-pipe drains will be made at the unit prices per linear foot bid therefor in the schedule, which unit prices shall include the cost of unloading, hauling, storing, handling, preparing an even bedding, and placing the pipe; furnishing, hauling, handling, and placing the gravel fill about the pipe; placing burlap covering, where required; and of all other operations except the excavation of the trenches, required for the completion of the drains.

77. The 4-inch and 6-inch tile drains installed by plaintiff in the upper and lower levels of the cut-off trench near the left abutment, as described in the foregoing findings, were constructed in accordance with paragraph 61 of the specifications.

There were 260 feet of 4-inch tile installed by plaintiff in the bottom of the cut-off trench and 500 feet of tile installed in the upper drainage system, of which 350 feet were 4-inch tile and 150 feet were 6-inch tile. The contract value for the construction of 610 feet of 4-inch tile drains at 70 cents per linear foot is \$427. The

value of the construction of 150 feet of 6-inch tile drains at 80 cents per linear foot is \$120, or a total of \$547.

78. In connection with the installation of these drain tiles plaintiff had installed grout pipes and connections with the drainage system for which it was paid under item 32 of the contract pay schedule. The grout pipe risers, however, interfered with the placing of earth embankment and necessitated compaction around these

pipes by mechanical tampers. The extra cost to plaintiff for tamping around the grout pipes was \$431.71, consisting of the following:

Labor—tampers, 389.5 hours at 80¢	\$311.60
Pay-roll insurance and taxes at 8.45%	26.33
ray-ron insurance and taxes at 3.40 /6.	
Rental pneumatic tampers 389.5 hrs. at 142 per hour	54.53
[10] [20] [20] [20] [20] [20] [20] [20] [2	
Total	392.46
LOISI	004. 10
Allowance for superintendence, general expense and profit at 10%	
of the above costs	39.25
of the above costs	
[1] [1] 20 전 10 전	
Total Total	431.71
	100

79. Plaintiff excavated approximately 225 cubic yards of material for tile drain trenches, for which it was not paid. Under paragraph 48 of the specifications this work carried the rate of 35 cents per cubic yard under item 11 of plaintiff's unit price schedule, having a value of \$78.75.

The total contract value for installing these tile drains, plus the additional expense of hand tamping around the grout risers and the value of material which the Government furnished but laterededucted from plaintiff's final voucher in the sum of \$398.53, amounts to \$1,455.99.

### Claims Nos. 7 and 8

Cost of constructing tile drains along the right side of the outlet channel and under the floors of the outlet and spillway channels

80. These claims involve the installation of some 431 linear feet of 4-inch tile with open end joints similar to the construction of tile drains in Claims 6 and 10. This tile drainage was installed along, the right side of the outlet channel below the outlet conduit for approximately 205 feet with a wye connecting drain from approximate station 14+50 extending diagonally across the outlet channel

to approximate station 15+00. Plaintiff claimed \$362.03 for the installation of this drainage under Claim 7:

A second line of drainage extended from the left side of the outlet channel at approximate station 15 + 82 directly across the bottom of the channel and downstream on the right hand side to the approximate confluence of the spillway and outlet channels and across the spillway channel to a sump outside the construction area. This drain was later connected with a permanent 8-inch drain in the spillway channel. Plaintiff claims \$231.98 for installing this drainage system.

All of this drainage was constructed with 4-inch tile with open end joints similar to the installations in Claims 6 and 10. The Government also furnished the tile used in these drainage systems. It totalled 431 linear feet. In the final voucher the value of the material furnished by the Government in the sum of \$55.34 was deducted from sums otherwise due plaintiff, and plaintiff now claims refund of this amount.

81. Centract specifications set out under Claims 6 and 10, relating to the diversion of the river, unwatering the foundations for construction and drainage apply in like manner and effect to Claims 7 and 8 herein. Paragraph 78 of the specifications also provides in part:

Foundation surfaces upon or against which the concrete is to be placed shall be free from mud and debris. All water shall be removed from depressions before concrete is placed, All water shall be removed from depressions before the new concrete is placed. No concrete shall be placed in water except with the written permission of the contracting officer, No concrete shall be placed in running water.

Contract drawing No. 191-D-55 contains the plan of the outlet channel and drawing 191-D-49 contains the plan of the spillway.

A system of sewer pipe drains was provided under the floors of the outlet and spillway channels. There were two longitudinal drains and a series of cross drains under the floor of the outlet channel in the area involved herein. These drains connected with a sump at approximate station 13 + 50 at the down stream end of

the conduit. These subfloor drains were designed to relieve upward water pressure under the concrete floors of the channels and provide outlets for any accumulation of water under the channel floors.

82. About the first of June 1939, when excavation of the outlet channel and the excavation of the spillway channel in the vicinity of the confluence of the outlet and spillway channels were near completion considerable seepage was uncountered from the hillside on the right of the outlet channel and a number of springs were encountered on the left side of the outlet channel.

The area of the outlet channel involved was immediately below the outlet conduit from approximate stations 13+53 to 15+56. The outlet channel extended almost parallel with the slope or contour of the hill on the right and was substantially level in this area. The water did not readily drain from this area by opencut ditches and the foundation of the outlet channel became saturated. The Government engineers would not permit trench excavations for the installation of tile drains in the subgrade of the outlet channel nor the placing of concrete upon the foundation until it was properly dried out.

83. Plaintiff contends that the grade in this area was adequate for drainage by gravity and that open ditch drainage would have

properly restored the foundation. Open ditch drainage could have been constructed along the sides of the channel outside of the concrete construction, but defendant's engineers determined that the water could not so be properly eliminated and would not permit open ditch drainage.

Plaintiff protested the installation of gravel embedded tile drains unless it was paid the additional costs for this installation. Government engineers agreed to keep accurate costs incurred by plaintiff for this work for consideration in case the contracting officer made a determination that the work involved was outside the contract specifications. There were no written orders directing plaintiff to perform the work in the manner specified by defendant's engineers and plaintiff made no written protest or claim for additional costs until after the work had been completed.

The installation of these drainage systems was similar to the permanent drains provided under the floors of the spillway and outlet channels, except that the ditches were approximately

one foot deeper than the permanent drains along the channel where this additional drainage was installed. They more nearly correspond to the spillway drains outside the wall footings as changed, as appears in our findings relating to Claim 5 herein.

84. Defendant's engineers staked out the lines and grades for these drainage systems. The drainage system installed under Claim 7 under and along the outlet channel was graded upstream and connected with the permanent drain and sump at approximate station 13 + 53. From this sump the water was pumped by plaintiff back into the reservoir.

The second drainage line was installed from a point on the left side of the outlet channel at approximate station 15 + 82, across this channel and downstream and across the spillway channel at approximate station 14 + 45 into a sump on the right hand side of the spillway channel. This line drained downstream and was later connected with a permanent 8-inch drain in the spillway channel.

These drainage lines were left in the channel where they were installed and serve as permanent drains for the subgrade of the outlet and spillway channels.

While the contract specification required the unwatering of foundations for construction, it does not specify the employment of tile drains for this purpose.

85. The drainage lines involved in these claims were installed in June 1939. On July 12, 1939, plaintiff submitted its costs under paragraph 10 of the specifications in the sum of \$362.03 for the extra tile drain installed in the subgrade and along the right side of the outlet channel as Claim 7. Its claim for cost of installing the 4-inch tile drain line across the outlet channel and the spillway channel was \$231.98 as Claim 8. These claims were considered in

conferences with the contracting officer in January 1940 and at later discussions.

In a conference in August 1940 the contracting officer determined that since plaintiff was required to unwater the foundations it should be charged with the sewerpipe involved in these claims which had been furnished by the Government. Accordingly there was deducted from plaintiff's final voucher the sum of \$55.34, representing the

value of the drain tile furnished by the Government and used in the drains involved herein. In its exceptions to

the final voucher, plaintiff increased its claims for the installation of tile by the value of the material so deducted.

In his decision of December 29, 1942, the contracting officer denied these claims in full, finding that the plaintiff failed to make its objections and protests of record in the manner and within the time limits required in the specifications and contract; that the Government did not order the drains installed at the locations as claimed but did require that the foundation of the work be satisfactorily unwatered; that the Government engineers staked out the lines and grades for installing the tile drainage as an accommodation to plaintiff; that such drains were not a necessary part of the permanent structure drains, although they may still be functioning since their removal was not required.

It was not possible to remove the drains involved herein since portions of them were constructed under the concrete foundations of the outlet and spillway channels.

Upon appeal by plaintiff the Secretary of Interior affirmed the contracting officer in his decision of July 7, 1943.

86. Plaintiff's extra costs of installing the 4-inch drains involved in these claims, with allowance for equipment rental on the basis of maximum use as that established for rentals under Claim 17, were \$497.30, and consist of the following items:

Labor	\$237.97
Pay-roll insurance and taxes	20.11
Hauling tile.	10.98
Gravel at \$2.25 per cubic yard	87.75
Equipment rental	95.28
	452.09
Allowance for superintendence, general expense and profit at 10 per-	302.03
cent of above costs	45:21
Total	497.30

The value of tile furnished by the Government but deducted from plaintiff's final youcher was \$55.34. Plaintiff's total costs were \$552.64.

87. The contract value of the 431 linear feet of 4-inch tile drainage placed; at 70 cents per linear foot under item 27 of plaintiff's contract payment schedule, is \$301.70. The rate of 70 cents 147 per linear foot was exclusive of materials which were to be furnished by the Government. The value of material originally furnished by defendant but charged against plaintiff's final voucher was \$55.34. Plaintiff was required to excavate approximately 160 cubic yards for these tile drain trenches having a value of \$56.00 at the unit price of 35 cents per cubic yard under bid items 7 and 9.

The total contract value of the work was \$413.04.

The proof does not show the cost or the contract value of the minimum measures which would have accomplished the unwatering of the area for placing of concrete.

## Claim No. 11

Cost of gravel-filled drain on the vertical curve of spillway and along the right side thereof

88. Plaintiff claims \$265.24 under paragraph 10 of the specifications for the construction of a gravel-filled drain extending diagonally across a portion of the vertical curve section of the spillway at approximate station 26 + 75 and along the right side of the spillway to a sump for a distance of about 97 feet.

The specifications quoted under Claims 6 and 10 are similarly

applicable to the conditions encountered in this area.

89. Excavation for the stilling basin at the foot of the spill-way channel and of that portion of the spillway leading into the stilling basin was nearing completion early in August 1939. The area involved herein is that portion of the spillway channel marked section "G-G" on contract drawing, 191-D-49. This portion of the spillway foundation was constructed with an abrupt slope or vertical curve as it terminated in the stilling basin.

Upon the completion of the grading of the foundation slope of the spillway channel in this area a spring was encountered upon the slope a little to the right of center of the spillway channel. This seepage flowed along the surface of the spillway channel foundation and accumulated in the stilling basin below. Permanent drains provided under the spillway channel could not be used to rid the area of this water because these subgrade drains were to empty into

the stilling basin by means of a metal pipe protruding from the drains under the concrete floor up into the stilling basin area. Concrete work had not been completed in the stilling

Defendant's engineers determined that a special drain would be necessary to carry this seepage out of the construction area and proposed that plaintiff construct a gravel-filled trench diagonally across the slope of the channel foundation and down the right side thereof. Plantiff protested and requested a written order for the performance of this work, claiming that it was extra work under the contract specifications. Neither plaintiff nor defendant anticipated that a spring would be encountered in this area or in any of the areas previously discussed wherein tile drains were required. Defendant suggested the gravel-filled drain and required that the preparation for the foundation be acceptable for the placement of concrete thereon. The construction engineer considered that this was a requirement under the contract specifications, and declined to issue any written order for its performance.

90. Between August 4 and 8, 1939, plaintiff constructed a screened gravel-filled trench about 2 feet wide and 16 inches deep from a point to the right of the center of the spillway vertical curved foundation diagonally across the right side of the spillway channel to a sump about 35 feet below. The water was pumped from this

sump over into the river channel below the stilling basin.

The concrete slabs for the spillway channel were placed above the gravel-filled drain in the subgrade foundation, and this drain

became a part of the permanent foundation structure.

97. On September 8, 1939, plaintiff submitted its claim for the construction of this gravel-filled ditch known as a "French drain" in the sum of \$265.24. The defendant does not contest the amount of plaintiff's cost for this work except the value of equipment rental involving an 8 cubic yard Euclid truck for hauling material.

By decision of the contracting officer December 29, 1942, plaintiff's claim was denied in toto on the ground that the unwatering of the foundation of the spillway was an obligation of the 149 contractor under the specification. This decision was upheld by the Secretary of the Interior upon an appeal by plaintiff.

92. Plaintiff's cost for the installation of approximately 97 feet of gravel-filled French drain was \$203.64 and consists of the following items:

Labor	\$87.73
Pay-roll insurance and taxes at 8.713. Gravel 15 c. y. at 2.25.	33.75
Euclid truck—8 c. y. 16 hrs. at 3.50	56.00
	185.13
Allowance for superintendence, general expense and profit at 10%	18.51
	203.64

No Government material was involved in the construction of the drain involved herein.

The proof does not show the cost of the minimum measures which would have accomplished the unwatering of the area for placing concrete.

### Claim No. 13

Claim for exeavation and separation of materials upstream from station 15 + 00 in the spillway

93. Specification paragraph 46, Excavation for Spillway, states in part:

Common excavation from the spillway upstream from station 15 + 00 will not be required to be separated into sizes. \* \* \*

Item 6 of the contract pay schedule provides for the payment of common excavation upstream from station 15 + 00 of the spillway at 23 cents per cubic yard. All other common excavation, requiring separation of cobbles, specified payment at 35 cents per cubic yard.

94. About August 1939, plaintiff was orally directed to separate the cobbles from a portion of the excavation upstream from station 15+00 of the spillway. By letter of September 7, 1939, to the construction engineer; plaintiff wrote that it expected to be paid for the additional cost of hauling this material to the separating plant, separating and rehauling it to the embankment.

On December 11, 1939, plaintiff submitted its claim for costs of excavating and separating materials upstream from station

15 + 00 in the spillway for the period August 31 to November
4, 1939, under paragraph 10 of the specifications, in the sum of \$4,892.70. Plaintiff was not paid for any excavation under item
6 of its pay schedule during this period.

95. On May 22, 1941, the construction engineer transmitted to plaintiff order for changes No. 5, dated April 12, 1941, and reading in part as follows:

2. In lieu of excavating common material for spillway upstream from station 15+00 with no requirement for separation of material into sizes, as provided by the specifications, you are directed to excavate common material for spillway upstream from station 15+00, and separate the suitable material from this excavation into cobbles  $2\frac{1}{2}$  inches or more in diameter, which shall be placed in the cobble-fill portion of the embankment, and into material less than  $2\frac{1}{2}$  inches in diameter, which shall be placed in the earth-fill portion of the embankment.

This change ordered payment at the rate of 50 cents per cubic yard.

Plaintiff did not accept this order for change, for the reason that it included an outstanding claim by plaintiff's subcontractor, for gravel, which was later adjusted.

96. In his report and findings December 29, 1942, the contracting officer determined that an equitable adjustment was 50 cents per

cubic yard for 8,250 cubic yards excavated and separated in the spillway upstream from station 15 + 00, and allowed \$4,125 on this claim. Plaintiff took no appeal on this decision.

Plaintiff now claims \$4,125, which sum is not contested by the defendant. Plaintiff was paid no portion of the amount allowed by the contracting officer, nor for the yardage involved in this allowance.

## Claim No. 17

Claim for excavating, separating and hauling materials for embankment from borrow pit No. 2

97. Plaintiff claims its cost for excavating, separating and hauling approximately 846,891 cubic yards of material from borrow pit No. 2 during the calendar year 1940 under paragraph 10—of the specifications. This claim also includes cost of excavating, separating and hauling approximately 79,847 cubic yards of material from borrow pit No. 2 in November

1939 under Item 16 of its contract at 35 cents per cubic yard. Plaintiff was paid for all the yardage excavated from borrow pit No. 2 under Item 14 of its contract at 23 cents per cubic yard.

Item 14 of plaintiff's contract unit price pay schedule provides for common excavation in borrow pits and transportation to the embankment at 23 cents per cubic yard. Item 16 provides a rate of 35 cents per cubic yard for all classes of excavation from borrow pits and for its separation of cobbles and transportation to the embankment.

# 98. The contract specifications provide in part as follows:

52. Borrow pits.—All materials required for the construction of the dam embankment, for riprap for the spillway and diversion channels, and for backfill, which are not available from required excavations, shall be taken from borrow pits as directed by the contracting officer. The location and extent of all . borrow pits shall be as directed by the contracting officer, and the Government reserves the right to change the location of such borrow pits or to locate additional borrow pits as required. but such pits will be located as close as feasible to the work in which the borrowed materials are to be used. \* \* \* The contractor shall separate the cobbles 21/2 inches or over in size from the materials excavated in the cobble borrow pits. separated cobbles shall be placed in the cobble-fill portions of the embankment, and the undersize material, if suitable, in the opinion of the contracting officer, shall be placed in the earth-fill portion of the embankment. Materials excavated from cobble borrow pits will not be classified for payment. Payment for excavation in borrow pits and transportation to

embankment and to spillway and diversion channels will be made at the unit prices per cubic yard bid therefor in the schedule, which unit prices shall include the entire cost of excavating the materials from the borrow pits, separating the material excavated from the cobble borrow pits, and transporting the materials to the embankment and to the spillway and diversion channels: \* \* \*

55. Earth fill in embankment.— No stones having maximum dimensions of more than five inches shall be placed in the earth-fill portion of the embankment. Should stones of such size be found in otherwise approved earth-fill embankment materials, they shall be removed by the contractor either

152 at the site of excavation or after transporting to the embankment, but prior to rolling and compacting the materials in the embankment. Such stones shall be placed in the cobble-fill portion of the embankment as approved by the contracting officer.

57. Cobble and rock fills on slopes of embankment.— \*\*

The cobble and rock fills shall consist of cobbles over 2½ inches in diameter separated from required excavation and from materials excavated from cobble borrow pits as provided in paragraph 51. [Should be paragraph 52.]

99. Contract drawing No. 191-D-45 entitled borrow pit and test hole data, designates the general areas for borrow pits. The earth borrow pit area on the right side of Pine River was later designated as borrow pit No. 1 and was extended as shown in defendant's exhibits 1A, B and C; and defendant's 17C, involving Claim 1 herein.

The earth borrow pit located on the left side of the river was later designated as borrow pit No. 2 and was extended in 1940 into areas Nos. 1 to 8; inclusive, more particularly represented in drawings marked plaintiff's exhibit 17-(24), defendant's exhibits 17-A (19) and 17-C. The cobble borrow pit designated on the contract drawing below the embankment and on the left side of the river was never actually used, although approximately 5000 cubic yards of material was obtained from this area in 1941 for the purpose of topping out the embankment. Materials had been provided and stock piled for this purpose in 1940 from borrow pit No. 2, but became flooded by the dam reservoir in the spring of 1941 and could not be used.

Contract drawing 191-D-45 specifies the number and locations where test pits and augur holes had been sunk in borrow pit No. 1 and the cobble borrow pit. No pits or holes were dug into the sub-

surface of borrow pit No. 2, although the area designated was known to contain suitable material for earth embankment.

100. During 1938 plaintiff had excavated from borrow pit No/2 approximately 95,000 cubic yards of impervious material for use in Zone 2 of the embankment. This was taken from the top stratum

of approximately 6 to 10 feet from borrow pit No. 2 as designated. Below this material plaintiff encountered coarse

material containing a large quantity of cobbles in excess of five inches in diameter. No further excavation was performed in borrow pit No. 2 until November 1939. Zone 2 material, in addition to that obtained from required excavation, was obtained thereafter from borrow pit No. 1. Additional coarse materials had been excavated from small areas immediately upstream from the embankment.

101. In the fall of 1939 defendant's engineers determined that substantially all of the coarse material thereafter required would have to be obtained from the area of borrow pit No. 2. Required excavation in the construction area was substantially completed at that time. Suitable materials in the required excavation produced considerably less cobbles than had been calculated, so that it became necessary to obtain not only additional coarse material but substantially more cobble-fill from borrow pits than had been anticipated. During 1939 additional Zone 2 materials for embankment use were excavated from borrow pit No. 1. The transition materials for the embankment between Zone 2 and Zones 1 and 3 were likewise obtained from borrow pit No. 1, by mixing coarse materials in the lower strata of this borrow pit with the overlying strata of fines and clay. Additional mixing was accomplished from stockpiled materials from the cut-off trench involved in Claim 2 herein.

In September 1939 the center core or Zone 2 of the embankment had been built up substantially higher than the adjoining Zones 1 and 3. The coarse materials required in Zones 1 and 3 of the embankment were not available in borrow pit No. 1. Defendant contends that plaintiff was given the option of providing the necessary coarse materials from borrow pit No. 2 or sub-pits A to G, which were considered extensions of borrow pit No. 1. There was an adequate supply of the coarser materials in the areas of sub-pits A to G on the right side of the river, but, due to the fact that the water table was approximately 4 to 6 feet from the surface, it became impracticable to excavate deep enough to obtain the required quantities from these areas, and sub-pits A to G were abandoned at the end of October 1939. (See Claim 1 herein.)

102. About November 1, 1939 plaintiff was directed to obtain additional coarse materials required in the embank-

ment from borrow pit No. 2. The placement and compaction of coarse materials in Zones 1 and 3 was continued until about Novem-

ber 24, 1939. Plaintiff objected to performing exeavation in borrow. pit No. 2 as "common" under Item 14 of its contract because of the large amount of oversized rock requiring separation, and requested that the same be classified for payment under Item 16 of its contract.

The coarser materials were thereafter excavated from borrow pit No. 2 and placed in Zones 1 and 3 of the embankment. Oversized rocks were removed by the use of rake-dozers. This work was continued until about November 24, 1939 when approximately 79,847 cubic yards of material had been excavated from borrow pit No. 2 and placed in Zones 1 and 3 of the embankment. The oversized rocks were removed by the rake-dozer from each lift as the embankment was built up and were pushed toward the toe slopes of the embankment where they were used for cobble or rock fill.

On December 11, 1939 plaintiff signed its November 1939 partial payment voucher under protest because the excavation in borrow pit No. 2 had been included under Item 14 of its contract pay schedule as common excavation, rather than under Item 16 for excavating and separating the cobbles.

103. During the winter of 1939-1940 defendant's engineers made sub-surface explorations over borrow pit No. 2 and adjacent areas extending for considerable distances up the river and toward the hills designated as areas No. 1 to No. 8. These extensions were considerably farther from the embankment where the materials had to be placed.

Borrow pit No. 2, as extended was found to contain adequate quantities of coarse material required in Zones 1 and 3 of the embankment. Small areas or pockets of fine silt and clay, suitable for Zone 2 of the embankment, were also found in portions of these areas. However, cobbles greater than five inches in diameter were determined to exist in substantially all of these-materials. Borrow pit No. 2 was divided into eight areas wherein similarity of materials was found. Area No. 1, which was located in the vicinity of original borrow pit No. 2, and nearest to the embankment,

contained the greater percentage of oversized cobbles. The material in this area was substantially the same as that encountered by test pits in the cobble borrow pit designated on drawing 191-D-45. Other areas in borrow pit No. 2 as extended were determined to contain lesser quantities of cobbles in excess. of five inches in diameter.

104. Plaintiff continued its claim for the classification of the excavation in this area under Item 16 of its contract. Numerous letters were exchanged from and after December 1939. Plaintiff advised defendant's engineers that the use of the rake-dozer for separating materials from borrow pit No. 2 was not practicable because it could not obtain quantity production by this method.

Plaintiff had constructed an additional rake-dozer unit to separate the material from borrow pit No. 2 in November 1939. Plaintiff's representatives advised defendant's engineers that it would be necessary to set up its separation plant to separate materials coming from borrow pit No. 2, and repeatedly requested advice as to the location of borrow pits for the 1940 construction season.

Defendant's construction engineer advised plaintiff's superintendent that the matter of removing 5-inch plus cobble from the earth fill of the embankment was plaintiff's responsibility and that defendant was not concerned with whether or not plaintiff found it necessary to use the separation plant for this work, that borrow pit No. 2 was designated in the specifications as an earth borrow pit and would be classified for payment as common excavation under Item 14 of its contract unit price pay schedule. Defendant's construction engineer declined to issue any written order requiring the plaintiff to excavate cobble materials in the borrow pit No. 2 as extended, holding that the extension of this borrow pit or the location of new ones was within the specific provisions of plaintiff's contract.

105. The explorations performed by defendant in borrow pit No. 2 as extended were completed about the end of March 1940, and a chart thereof, together with findings from each test pit was submitted to plaintiff on April 27, 1940.

The placing of materials in the embankment started about the end of March 1940. By April 1st the second diversion of Pine

River had been completed from the temporary diversion channel through the outlet works. The area of the temporary channel was immediately built up with importance

rary channel was immediately built up with impervious material from borrow pit No. 1. The excavation from borrow pit No. 1 and the construction of the embankment over the temporary diversion channel up to the approximate level of other embankment fill was completed about April 21, 1940. On April 22, 1940, plaintiff moved its excavating equipment into borrow pit No. 2. Coarse material from borrow pit No. 2 was delivered to Zones No. 1 and No. 3 of the embankment. The removal of oversized rocks from this excavation was again performed by rake-dozers, since plaintiff's screening plant was being dismantled and transferred to the lowerend of borrow pit No. 2.

106. Plaintiff's screening plant had been constructed on the lower side of the dam to the left of the outlet and spillway channels. Plaintiff had anticipated that it would not be necessary to move the separation plant since the specifications provided that cobble borrow pit material would be obtained from the left side of the river below the dam in the area designated "cobble borrow pit". Plaintiff contemplated hauling the cobble borrow pit material over to its screening plant near the embankment and making the necessary

separation at that point. When plaintiff was advised that use of the specified cobble horrow pit would not be necessary but that cobbles would be obtained from borrow pit No. 2, plaintiff determined that it would be advantageous to move the separation plant upstream and adjacent to the area of this borrow pit. Plaintiff dismantled and removed its separation plant during the period March 28 to May 11, 1940.

Plaintiff's separation plant as originally constructed at the dam site provided a conveyor belt to carry the material into the separating unit. In reconstructing the plant plaintiff provided a ramp whereby materials could be hauled up and dumped into a chute leading into the separation unit. A large grizzly, providing for the elimination of extra large rock, was continued in use as well as the separating unit with 2½ inch bars. Plaintiff started using the separation plant on May 12, 1940, and found that it would not operate satisfactorily. The many very large stones would tend to obstruct the chute, preventing other materials from feeding

properly into the separation unit.

ehanged the power units from Diesel to electrical motors, except in the case of the grizzly, power for which was furnished by a gas motor. Also the separation bars were changed from 2½-inch spaces to approximately 4-inch clearances in order to admit the passage of larger stones into the material for earth fill. The excavation from borrow pit No. 2 was hauled to the embankment and separated by use of rake-dozers until June 22, 1940, when the screening plant was again placed in operation. It functioned very satisfactorily and thereafter all the materials excavated from borrow pit No. 2 up until the close of the season, November 7, 1940, were run through the separation plant.

107. By letter of April 24, 1940, the construction engineer, C. A.

Burns, wrote plaintiff in part as follows:

This will refer to our conversation with Mr. Martin Wunder-lich of even date; relative to earth borrow pit No. 2. As stated to Mr. Wunderlich, the location of his screening plant and the method of operation are not our concern. However, in discussing the screening plant, it developed that the same screen was to be used as was used in separating material excavated from spillway. It was thought best to mention the fact that the requirement of the Government would be in compliance with paragraph 55, subsection C: "No stones having a maximum dimension of more than 5 inches shall be placed in the earth fill portion of the embankment." Likewise, all stones with maximum dimensions less than 5 inches are to be placed in zones 1, 2 or 3 of the embankment together with the balance of the material for those zones.

By reply of April 29, 1940, plaintiff protested the requirement that all stone less than five inches be left in the material and placed on the earth embankment.

By letter of May 14, 1940, the construction engineer wrote plaintiff further in respect to the separation of cobbles in part as follows:

It has been noted that the screening plant which you are erecting for processing materials from earth borrow pit No. 2 is equipped with a grizzly having bar spacing of 21/2 inches. You are advised that you will be required to remove from earth borrow pit materials only the stones having e maximum dimensions of more than five inches, as is provided in paragraph 55 of the specifications. The material rejected by your grizzly will be suitable for use in the rockfill portion of the dam; however, you are advised that should the amount of this material be in excess of the amount required to construct the rockfill portions of the dam, which appears likely, the Government will be unable to utilize such excess or to make any payment to you for it, either as excavation in the borrow pit or as embankment in place or otherwise. Therefore, you may desire to change your grizzly so that it will reject only the stones having maximum dimensions of more than five inches.

When plaintiff's screening plant did not function satisfactorily and it became necessary to remodel it, plaintiff changed the separating bars on the grizzly from 2½-inch openings to approximately 4-inch spaces to admit stones for use in the embankment fill up to the approximate maximum, and to avoid an excess of cobbles.

108. Defendant's construction engineer wrote plaintiff on April
26. 1940, in part:

Your attention is again directed to Specifications 705, and particularly to those paragraphs which refer to borrow pits and placing of earth fill in embankment, paragraphs 52 and 55, respectively, as well as drawing 191-D-45, all of which are a part of your contract (refer to article 1 of contract). This drawing clearly indicates the location of the borrow pits from which earth embankment materials have been obtained in past seasons and from which material to complete, all zones of the embankment will be secured as required. This includes the two earth embankment borrow areas shown on the right and left sides of the river upstream from the dam, and the cobble borrow area downstream, if required.

Since the location of these areas are clearly outlined on the above drawing no written instructions are required. It is further pointed out that paragraph 52 provides that the Government reserves the right to change the location and extent of all borrow pits or locate additional borrow pits as required. The earth embankment borrow pit area on the left side of the river will probably be extended upstream to procure the different types of earth material for the various zones of the embankment.

159 - By letter of April 29, 1940, plaintiff protested the decision of the construction engineer stating that its protest was filed in accordance with paragraph 14 of the specifications No. 705.

Defendant's construction engineer wrote plaintiff on May 6, 1940,

in reply to its protest, in part as follows:

The previous written instructions and rulings of the contracting officer relative to the above mentioned feature of the work have been carefully reviewed in connection with the consideration of your protest. No modifications of the previous instructions and rulings have been found necessary, and you are directed to proceed with the work in accordance with the instructions now in effect. Your letter is accepted for record as a protest in those matters which are covered by your statements, subject, however, to the conditions as stated in paragraph 14 of specifications No. 705.

109. This matter was further discussed in conferences from June 6 to 8, 1940, at which time the contracting officer determined that an equitable adjustment should be made and proposed that area No. 1 of borrow pit No. 2 be designated as so cobble borrow pit.

On June 14, 1940 order for changes No. 2 was issued by the con-

tracting officer providing in part as follows:

In lieu of obtaining cobbles to complete the cobble fill portions of Vallecito Dam from the cobble borrow pit area as shown on drawing No. 191-D-45 in specifications No. 705, you are directed to obtain the cobbles required to complete the cobble fills from the cobble borrow pit area at the location which is indicated on attached drawing No. 191-D-47. Because of failure to secure the expected yield of cobbles from separation of cobbles from the required excavation, the excavation and separation of material from cobble borrow pits in increased to approximately 300,000 cubic yards.

You will be paid for items of work at the contract unit prices as though no changes had been made in the location of the cobble borrow pit area and the provisions for overhaul from cobble borrow pits, as stated in paragraph 52 of specifications No. 705, will apply to cobbles excavated from the cobble borrow pit area as designated by this order.

There was attached to this order for change a drawing designating the lower part of borrow pit No. 2, covering approximate area No. 1, as a cobble borrow pit. Plaintiff declined to accept order for change No. 2 and by letter of July 19, 1940, made a counterproposal reading in part as follows:

The Martin Wunderlich Company will accept for all excavation taken this year from borrow pit No. 2 thirty-two cents (\$.32) per cubic yard, on the distinct understanding that the haul is to be paid for as cobble borrow haul, that payment for excavation will be made promptly as contemplated by the contract, and that the haul will be paid for at the time specified in the contract. This proposal does not extend to or cover cobble excavation done last fall, amounting to approximately eighty thousand (80,000) yards in area No. 1 of borrow pit No. 2.

The Martin Wunderlich Company agrees that, if, after seventy-five per cent (75%) of this work has been performed, the Bureau finds that the above price is more than the cost of the work plus ten per cent (10%), then the B reau may pay for such work on the basis of cost plus ten per cent (10%). The thought is that, if at that time the average cost per cubic yard computed over the period during which seventy-five per cent (75%) of the work has been done plus ten per cent (10%) is less than the price above proposed, then the Bureau may pay the lesser amount, namely, such cost plus ten per cent (10%).

Plaintiff's proposal was rejected by the contracting officer by letter of August 10, 1940.

110. On August 29, 1940, plaintiff was furnished a form copy of order for changes No. 3, which was dated August 31, 1940, reading:

Pursuant to Article 3 of the contract with you dated March 16, 1938 (symbol No. 12r-8413), the following changes are hereby ordered in the drawing and/or specifications:

In lieu of obtaining cobbles to complete the cobble fill portion of the embankment of the Vallecito Dam from the cobble borrow pit area as designated on drawing 191-D-45 of specifications No. 705, you are directed to use the cobbles obtained from earth embankment borrow as directed by the contracting officer: Provided, That any deficiency of cobbles from the earth embankment borrow pits shall be made up of cobbles from the cobble borrow pit area: Provided further,

That in making up this deficiency you will at your option be permitted to separate the material on the same size screen as used in separating material in earth borrow

pit in lieu of 21/2 inches in diameter as provided in paragraph

57 of the specifications.

Any claim for adjustment of the amount due under the contract by reason of the changes shall be stated and filed with the contracting officer within ninety (90) days from the date of this order unless the contracting officer shall, for proper cause, extend such time.

By letter of November 22, 1940, plaintiff requested an extension of time for thirty days to file its elaim under the provisions of order for changes No. 3. The extension was granted by the con-

struction engineer November 25, 1940.

111. On December 28, 1940, plaintiff presented its claim for adjustment under order for changes No. 3 at its cost of performance plus 10% for superintendence, general expense and profit in accordance with paragraph 10 of the specifications, in the amount of \$334.994.42.

A revised claim was submitted on April 8, 1941, with costs totalling \$366,924.39.

Under date of June 16, 1941, the contracting officer replied as follows to the plaintiff's claim:

Reference is made to order for changes No. 3, dated August 31, 1940, pursuant to article 3 of contract dated March 16, 1938 (symbol No. 12r-8413.)

Your claim, dated April 5, 1941, has been considered and you are advised in regard thereto as follows:

- 1. The statement of claim is presented upon the basis of the total cost plus 10 percent, as shown by your records, of the operations required in excavating, separating, and transporting embankment materials from borrow pit No. 2 for use in the construction of the embankment at Vallecito Dam and includes labor costs, allowances for use of equipment, and costs of materials furnished.
- 2. The hours of labor and rates of pay for the contractor's employees engaged on the work under the order for changes have been checked and are found to be correct with exceptions as stated below.
  - 3. The hours of use of equipment as set out in your claim are found to be correct except as stated below.
- 162 4. The cost of materials as stated in your claim is found to be correct.
  - 5. The following exceptions are made to your claim of costs:
- (a) Your claim includes allowance for the use of sheepsfoot rollers and tractors for propelling the same, and for labor costs of operating this equipment. As the use of sheepsfoot rollers

on the embankment is part of the operation of placing materials in the embankment, the cost of using these rollers is not a part of the costs allowable under order for changes No. 3 and is, therefore, disallowed.

(b) Your claim for allowances for the use of equipment under the order for changes is based upon hourly rates for the several items of equipment which are in excess of the rates allowed in current work under cost-plus extra work orders. The rates allowed for the use of equipment under this order for changes are summarized on the tabulation of "Allowances for use of equipment and operating expense" attached to this order.

Adjustment of the amount due under the contract and/or in the time required for its performance by reason of the changes will be as follows:

Although there is no order or instruction of the contracting officer to you directing that the operations in borrow pit No. 2 be paid for on the basis of the actual necessary cost plus 10 per cent, you have submitted your claim on that basis, and an adjustment on such basis is now found to be equitable. You will be paid the actual necessary cost of excaviting, separating, and transporting materials from borrow int. No. 2, during the year of 1940, plus 10 per cent thereof, in accordance with the following determination:

1.	Labor costs (including compensation insurance and social	72 W.
	security taxes), in the total amount of	\$89.860.42
2.	Materials (explosives), in the total amount of	94.59°
		145,230,07
		-
	Total for year of 1940	235 185 08

You have been paid at the rate of \$0.23 per cubic yard for excavating, separating, and transporting \$46,891 cubic yards of materials, or a total sum of \$194,784.93 for materials removed from borrow pit No. 2 during 1940. The net increase in amount due for work performed under this order, during 1940, is......\$40,400.15.

The total net increase in amount.....\$44,208.85.

When the embankment at Vallecito Dam is satisfactorily completed, you will be allowed as an adjustment in payments on the foregoing basis, the following:

No adjustment in the time required for the performance of the contract will be made by reason of the changes.

An approximate estimate of the change in the amount due under the contract follows:

Estimate to accompany or CONTRACT NO

Item No.	Work or material Previous
, 14	Items—Schedule of Specifications No. 705  Excavation, common, in borrow pits for earth fill in embankment and transportation to embank-
16	Excavation, all classes, and separation of excava- tion in borrow pits for cobble fill and transporta- tion to embankment. 50,000 Item—This Order for Changes
(a)	Additional requirements in borrow pit No. 2, at the lump-sum payment of
Water and Street	Net increase in amount of contract

er for Changes No. 3 12r-8413

1.2	Quantity :			Am	ount
Decrease	Increase	Unit	Unit price	Decrease	Increase
	50,000	сy	0.23		\$11,500.00
50,000		cy	0.35	\$17,500.00	•
	1	1. s.		1	44,208.85
				17,509.00	55,708.85 38,208.85



claim showing costs of \$389,923.78. Plaintiff contends that the revisions in this claim were made necessary because of cost of moving its separating plant and adapting it to the material in borrow pit No. 2, which cost had previously been capitalized. At this time it claimed such cost as a direct charge against the operation in that borrow pit.

Plaintiff first moved and reconstructed its screening plant adjacent to borrow pit No. 2, eliminating the conveyor belt which had been previously in use. In remodelling the plant, plaintiff reinstalled a short conveyor belt along with other new installations, between May 12 and June 21, 1940. A portion of plaintiff's costs in reconstructing and remodeling its screening plant was due to its construction which necessitated these additional changes. The contracting officer had included in the allowance all labor costs incurred in dismantling and reconstructing the plant for use at borrow pit No. 2.

113. In his decision of December 29, 1942, the contracting officer awarded plaintiff the sum of \$44,208.85 in harmony with the statement "adjustment of compensation" which had been submitted to plaintiff and which had been declined.

Plaintiff appealed from this award by the contracting officer, and the Secretary of Interior denied this appeal July 7, 1943, confirming the allowance of \$44,208.85, as determined by the contracting officer.

114. Equipment rental. The difference in cost between plaintiff's claim and defendant's allowance under order for changes No. 3, relates in part to the allowances for equipment used by plaintiff in its operations in borrow pit.No. 2. Both sides rely on the ownership rental schedule issued by the Bureau of Reclamation dated January 2, 1940, which was prepared by that office for consideration of allowances on extra work orders under construction contracts and is filed, herein as plaintiff's exhibit 17-C. In this schedule the Bureau of Reclamation had adopted the annual rental rates established by the Associated General Contractors of America in its 1938 equipment ownership expenses schedule filed herein as plaintiff's exhibit 17-B. The rates so established are for calendar years, reduced to use periods in calendar months. There rates apply to one shift for each calendar day or thirty shifts per calendar month

166 use. Rental differences between plaintiff, and defendant resulted primarily in the application of this rental schedule to the actual time plaintiff used its equipment in borrow pit No. 2, for excavating, separating and hauling.

Equipment rental rates cover the use of equipment only and include no allowance for operator's wages, fuel and lubricants or other operating supplies. The items covered in the AGC (Associated General Contractors) annual rental rates and adopted by the Bureau of Reclamation, include interest on invested capital, depreciation, insurance, taxes, storage, major repairs, general over-

hauling and painting and equipment overhead. They do not include field repairs and maintenance to insure maximum operating efficiency. The AGC annual rates were applied in the Bureau of Reclamation rental schedule to the calendar months during which the equipment could be used. Said schedule states in part:

- 2. (f) Monthly rates are set up, based on the use of the equipment for one shift of 8 hours each day for 30 days. If use is required for more than one shift each day, this base rate shall be increased one-half for each extra shift of use.
- 3. (b) Extra shift rates should be used for all shifts over 30 per month.

Hourly rates set out in this schedule represent 1/100th of the rate

per month during the use period, based on 30 shifts in use.

115. During 1940 plaintiff excavated from borrow pits 1,295,724 cubic yards which was paid for under Item 14 of its unit price schedule. Approximately 846,891 cubic yards, or 65%, were excavated from borrow pit No. 2, which material was largely placed in zones 1 and 3 of the embankment. The remainder was excavated from borrow pit No. 1 for use in zone 2 of the embankment. Plaintiff also excavated 71,354 cubic yards of rock for use in the riprap fill of the dam. This represented 79,282 cubic yards of fill.

Placements of fill in the embankment during 1940 were 1,193 cubic yards of cobble and gravel fill paid under Item 20 of plaintiff's unit price schedule at 25 cents per cubic yard; 109,927 yards of cobble and rock fill paid under Item 21 of plaintiff's unit

price schedule at 15 cents per cubic yard; 94,147 cubic yards of riprap paid under Item 22 of plaintiff's unit price schedule at 20 cents per cubic yard, and the remainder placed in the earth embankment under Item 19 of plaintiff's unit price pay schedule at 5 cents per cubic yard.

There were placed in the riprap fill 79,282 cubic yards which had been excavated from a rock quarry and the remaining 14,865 cubic yards of riprap was obtained from excavation in borrow pit No. 2. The total riprap, cobble and rock, and cobble and gravel fill from borrow pit No. 2 excavation was 125,985 cubic yards or 13.39% of the material excavated from borrow pit No. 2, exclusive of voids

in this fill amounting to about 10% thereof.

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116. Plaintiff's 3½ cubic-yard dragline was used in borrow pit No. 1 for excavating Zone 2 material. When this zone of the embankment was constructed in advance of Zones 1 and 3, the dragline was shifted to borrow pit No. 2. This procedure continued throughout the work season of 1940. During January and February 1940 plaintiff excavated and hauled some 26,316 cubic yards of rock from the quarry several miles upstream, where the dragline was used 32 hours.

Due to the shifting of excavating and hauling equipment between borrow pits No. 1 and No. 2 and work upon the embankment, plaintiff's costs for excavating in borrow pit No. 2 were determined upon actual hours of equipment use in this pit. Periods of use by calendar months could not be reasonably determined.

The Bureau of Reclamation equipment rental schedule showed normal use periods of eight calendar months each year for most of the equipment used on this job. Plaintiff operated two shifts daily during its 1940 work season, except when weather conditions

did not permit dam construction.

Plaintiff computed its hourly rental rates for one full shift for eight calendar months of operation and a second shift during six calendar months of its operation. The hourly rental so determined, however, was arrived at by dividing the total rent by actual hours of performance in 1940 by the several units of equipment. Defendant computed hourly rental rates applicable to plaintiff's perform-

ance in borrow pit No. 2 by dividing the annual rate on a two-shift daily basis for eight calendar months by the total number of hours for eight calendar months at 16 hours per day for each unit. No time was allowed for shut-downs on account of weather conditions, or for operations of less than two shifts per day. Thus it results that by plaintiff's rates it would recoup its yearly expense regardless of how much time its equipment was idle, while defendant's rates would require that all equipment work continuously all theoretical hours without any interruptions on account of weather, minor repairs or the like, in order to recoup such expense. Plaintiff actually operated from April 1 to November 7, 1940, or about 71/3 months except for work in the rock quarry engaging only a few units of equipment during January and February 1940.

The evidence shows that plaintiff's equipment was used at least one shift daily about 80% of the calendar period between April 15 and November 10, 1940. It further establishes that a second shift was employed only about 80% of the time the first shift was engaged, on which one-half rental rate would apply. In these findings, the rental rates established in the Bureau of Reclamation schedule were applied on the above bases to determine cost per hour for each unit. The total rental was divided by the total hours of performance on the above bases giving the hourly rate applicable to actual performance. With few exceptions the total hours computed on the above bases are considerably greater than the total hours of actual performance.

This method does establish a fair and reasonable hourly rental rate for the time equipment could have been used on a two-shift basis with due allowance for delays on account of weather conditions, minor repairs, etc. In a few instances plaintiff's equipment was actually used the full number of hours as determined above. As an example of the application of this method, plaintiff's 2½-

yard Lima shovel had a capital value of \$34,225, which value was used by both plaintiff and defendant. Both sides agree that the normal use period during any calendar year is eight calendar months at thirty calendar days, or a total of 240 calendar days. The AGC annual rental schedule for this type of equipment is 42% or \$14,-

374.50; or \$1.796.81 per calendar month of use. At one shift per day of eight hours, this equipment could have been used 1,920 hours with a rental rate of \$7.48 per hour. Since plaintiff's costs are based on actual hours of usage, allowance must be made for shut-downs on account of weather conditions, etc. With an abovance of 20% for shut-downs the eight months calebodar period represents 1.536 hours of actual performance. However, plaintiff engaged a second shift during approximately 80% of the time the first shift was in use, amounting to 1.229 hours at a second shift rate, with a rental value one-half the base rate applied for the first shift, or \$5,749.80. The hours so determined total 2,765 and the total rental amounts to \$20,124.30, or \$7.28 per hour. Plaintiff represents that its Lima shovel was actually used 2,687 hours during the 1940 construction season.

There were sixteen major classes of equipment on which plaintiff claimed its ownership rental expense for its operations in Borrow Pit No. 2 during 1940. The total value of this equipment was \$541,590. The annual ownership rental expense of this equipment, as determined from the ownership rental schedule prepared and used by the Reclamation Bureau was \$235,706.91. This rental value was predicated upon the use of such equipment for a period of eight months during the calendar year for eight hours each day at thirty days per month. This represents a work period of 1,920 hours on a one-shift basis.

Whenever it was practicable plaintiff operated on a two-shift basis. The contracting officer computed rental for each of the units of equipment on Borrow Pit No. 2 on the basis of two shifts per day, or a total work period of 3,840 hours for each unit of equipment. A 50% rental rate was applied to the second shift, thereby increasing the annual rental for the sixteen classes of equipment used to \$353,560.36. The hourly rate was then determined for each class of equipment by dividing the annual rate for a two-shift basis (150% of the one-shift basis) by 3,840 hours. The hourly rates thereby obtained were then applied to the actual hours of performance for each of these units which had been engaged in Borrow Pit No. 2 excavation and hauling. The amount so de-

termined by the contracting officer was approximately \$107,170 437.04 or 30.39% of the total ownership equipment rental for
this period.

This equipment was not employed 100% of the time during the eight-month work period on a two-shift basis. In fact this equipment could be used only approximately 80% of the eight-month calendar use period because of weather conditions. The second shift was only employed about 80% of the period that a first shift





was employed, making the total maximum time that such equipment could be engaged on an eight-month work basis 2,765 hours (144% of the 1,920 hours).

Since a second shift was engaged only 80% of the time the first shift was employed, the annual rental rate would be properly increased only 40% in value. In those instances where equipment was actually used a greater number of hours than the 144% (80 plus 80% of 80) of 1,920 computed at eight hours per day, the actual number of hours at 50% rate were applied. The total annual rate so determined would be \$317,475.72. By dividing the annual rates so determined by the maximum number of hours this equipment could have been used for its actual use, whichever was a greater, gives the rate per hour applicable to actual performance. By applying these rates to the actual hours of performance in Borrow Pit No. 2 gives the sum of \$137,519.42, or approximately \$30,000 in excess of that determined by the contracting officer. The rental so determined for performance in Borrow Pit No. 2 represents 43.32% of the total annual rental for the equipment involved.

117. Repair and Maintenance. In addition to the rental determined in the foregoing findings plaintiff's equipment costs included repair and maintenance during the time the equipment was in use. Plaintiff applied its actual cost of repair and maintenance to the actual number of hours of performance by each piece of equipment during the year to determine hourly rates. Defendant does not contest plaintiff's actual costs of repair and maintenance, but does contend that those costs were excessive and that it must be presumed that they include major repairs and general overhauling, which costs were included in the rental rates referred to above; and that a

reasonable criterion for the allocation of major repairs would 171 be such repairs as would keep a unit of equipment down for one whole shift or more. The evidence does not sustain this presumption. The only instance shown in the evidence of any piece of equipment down for repairs for a whole shift or more was the Lima shovel which was down for repairs for half a day July 2d, and all day July 3d and 4th, 1940. Field repairs and maintenance did not materially reduce the hours of use of equipment where parts were available:

The defendant allowed an arbitrary rate for field repair and maintenance for each unit hour of performance this equipment was engaged in Borrow Pit No. 2. The allowances for field repairs and maintenance by the contracting officer were not based upon plaintiff's costs. It was purportedly determined from experience on other jobs and allegedly sustained by comparable costs on similar equipment used on the Panama Canal excavation job during a later period.

The contracting officer's computations for repairs and maintenance were generally computed at a certain percent of the rental rates. In only one instance does the contracting officer's schedule

indicate that the repair and maintenance was taken from another job. Gardner-Denver jackhammers were given an allowance of 20c per unit hour for repairs and maintenance. It was noted that this represented an approved rate on the Shasta Dam. These jackhammers had an investment value of \$205 each. However, on Euclid tractor trucks, costing up to \$20,000, the contracting officer allowed 18c for repair and maintenance; and on the dragline, for which the contracting officer determined a capital value of \$39,89, an allowance of 30c per hour for repair and maintenance was made. By applying these rates for the respective units to the actual number of hours employed on Borrow Pit No. 2, the contracting officer's allowance for field repairs and maintenance was approximately \$9,319.97, or about 5.28% of plaintiff's total cost for field repairs and maintenance, amounting to \$176,430.41.

By applying plaintiff's actual cost for field repair and maintenance to the maximum number of hours this equipment was used or could have been used, except for weather conditions, would result in the sum of \$76,136.09 allocable to performance in Borrow Pit No. 2: This represents 43% of plaintiff's

total repair and maintenance costs.

on the basis of the maximum number of hours plaintiff's equipment was used or could have been used except for weather conditions, minor repairs, etc. Its repair and maintenance costs for each unit have herein been applied on the same number of hours determined for rental allocations above. As an example, plaintiff's repair and maintenance of the Lima shovel for the 1940 work season was \$7,770.85, or \$2.81 per hour applicable to the 2,765 hours of performance as determined for rental purposes.

119. The only other element of cost is represented by fuel and lubricants which, was determined by the contracting officer from experience on other jobs and from State officials. Plaintiff agreed to the allowances as determined and has adopted such allowances in its present claim. The allowance for fuel and lubricants on an hourly basis, as determined by the contracting officer, when applied to the actual hours of performance in Borrow Pit No. 2, gives the

sum of \$27,490.57.

120. It was determined that plaintiff's actual use of the Lima 3½-yard dragline was 2,876 hours during 1940 or 111 hours in excess of the hours computed on the foregoing bases. Its capital valus was \$39,189. By adding 111 hours at 50% of the first shift rental rate, which amounts to \$594.96, the total hours are increased to 2,876 and the total rental value is \$23,638.09, or \$8.22 per hour. Plaintiff's total repair and maintenance for this unit was \$12,232.63, or \$4.25 per hour while in use. Defendant allowed \$1.40 per hour for fuel and subricants which, when added to the rental and maintenance costs, make a total of \$13.87 per hour.

By applying the same bases to the 12 and 15 cubic yard Euclid trucks, it is found that plaintiff could have used the 12 cubic yard Euclid trucks a total of 16,589 hours, whereas plaintiff shows that its actual use of these trucks was 12,845 hours. The 15 cubic yard Euclid trucks are computed for available use of 33,178 hours, whereas plaintiff actually used these trucks a total of 24,510 truck-

hours. Rates were reduced accordingly in both instances. By applying the same bases to the 20 cubic yard Euclid trucks, it is found that plaintiff could have used these trucks a total of 5,530 hours, whereas its actual use was only 2,290 truckhours. These units were computed on the same bases as all other equipment, although they were purchased new during the summer of 1940. The rental rate as well as the hourly maintenance cost are substantially less than they would have been had plaintiff used these trucks throughout the entire season. These new trucks, however, were used only in connection with borrow pit No. 1 excavation and for handling earth embankment after it was screened, and were not utilized in hauling cobble material direct from borrow pit No. 2.

121. Plaintiff's costs for equipment owned and used for excavating, transporting and separating materials from borrow pit No. 2, as extended, during the working season of 1940 are contained in the following table:

			Total		
Description-	Units	Total value	hourly	Hours engaged	Total costs
Lima shovel 21/2 cy. #901	. 1	34,225	11.49	2:497.67	\$28,698.23
Lima dragline-3/2 cy. #901	-1.	39,189	13.87	933	12.940.71
Caterpillar tractor (95 hp.) RD-8	9	- 71,145	4.08	4.742.5	19,254.55
Le Tourneau Carryall Scrapers	4	23,392	.2.77	1.053	2.916.81
LeTourneau Bulldozer for RD-8	5	9,910	.81	3:504:5	2.838.65
Caterpillar Grader #77 Rower Control.	1	2.600	1.37	178.5	244.55
Auto Patrol Caterpillar Grader #12	2	11:000	2.14.	1.907.5	4.082:05
Euclid Tractor Truck-12 dy	6	76.500 -		10,750.08	55,255.41
Euclid Tractor Truck-15 cv	12	156,000	5.19	15,325.17	79,537.63
Suclid Tractor Truck-20 cv.	- 2	40,000	5 34 .	1.811	9.670.74
Euclid Water Wagon	2	18,350	3.30	1.671.75	
lug truck-8 cy. gas	3:	25,950	3.32	64.5	214.14
Gardner-Denver Compressor	1	7,146	194	32	62.08
Gardner-Denver Jackhammer	4	820	.24	91	21.84
Cohler Light Plants	3.	1,125	.28	870	243.60
Separation Plant	1	(20,000	1	0,10	. 210.00
Vaukesha Motor?	1	1.261	12 27	1 601 33	19,648.32
nternational Motor	1	2.477	}	.,001.00	10,910.00
Palmer Generator, 50 KV	1	500	1		
Totals		541,590			241,146.08

	otals.		65.		 0 0 0	 	.541,590	1	 	24	1,146.0
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summary o	equipment	costs:
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Ownersmp rental costs			\$137,519,42
Field Repair and maintenan	ice		76,136.09
Fuel and lubricants.			27,490.57
		1 1	

241,146,08

The foregoing expenses represent approximately 43% of plaintiff's total costs for the use and operations of plaintiff's equipment during the 1940 work season.

The performance in borrow pit No. 2 represented approximately 65% of the total materials moved from borrow pits to the embankment. This material was all separated after June 21, 1940, and handled a second time in making deliveries to the embankment. Deliveries prior to June 22, 1940, were delivered direct to the embankment but required a separation by rake-dozers on the embankment, which work was approximately equivalent to the separation of such material by the separation plant.

122. Plaintiff's costs of excavating, separating and transporting materials from borrow, pit No. 2, as extended, during the 1940 working season were \$340,951.73, consisting of the following classi-

fications:

Labor—excavating, separating and transporting materials	\$52,894.78
Labor—moving, remodeling and erecting screening plant	9.583.85
Pay-roll insurance and taxes	6.236.82
Materials—explosives	94.59
Equipment rental, maintenance, fuel and lubricants	@ 241.146.08
Ten percent allowance for superintendence, general expense	and
profit	

Total (for 846,891 cubic yards at 40 cents per cubic yard) 340,951.73

Plaintiff was paid for excavating and transporting 846,891 cubic yards of common excavation from berrow pit No. 2 during 1940 at 23 cents per cubic yard totaling \$194,784.93. Its excess costs were \$146,166.80 or 17 cents per cubic yard.

Plaintiff was also paid 23 cents per cubic yard for excavation, separation and transportation of 79,847 cubic yards of material from borrow pit No. 2 during November 1939. The additional value of this excavation at 35 cents per cubic yard for cobble borrow pit excavation is \$9,581.64.

Plaintiff's total excess costs so computed of excavating, separating and transporting cobble materials from borrow pit No. 2 are \$155,748.44.

123. Item 16 of plaintiff's contract unit price performance schedule specified payment of 35 cents per cubic yard for all classes of excavation and separation of excavation in borrow pits for cebble fill and transportation to the embankment. Plaintiff's performance of this type of work totaled 846,891 cubic yards in 1940 and 79,847 cubic yards in November 1939, or a total of 926,738 cubic yards.

It was paid at the rate of 23 cents per cubic yard or 12 cents per cubic yard less than that specified for Item 16. The total difference for excavating, separating and transporting 926,738 cubic yards at 12 cents per cubic yard is \$111,208.56

124. Paragraph 52, Borrow pits, provides for the payment of .2 cent per cubic yard per 100-foot station haul for all material ex-

cavated from borrow pits and hauled to the embankment in excess of the free hauls provided therein. This paragraph states in part;

The limits of free haul for materials excavated from borrow pits for the earth fill and cobble and sluiced gravelled-filled portions of the embankment will be 5,000 feet, and for cobbles excavated from the borrow pits for the cobble-fill portion of the embankment will be 2,500 feet. \* \* The station haul distances will be measured along the horizontal straight lines between the center of gravity of the materials as found in excavation in the borrow pits and the center of gravity of the completed embankment. \* \*

The evidence is insufficient for a determination of any overhaul of the material excavated from borrow pits.

### Claim No. 18

For excavation of change in grade of inlet channel to the outlet works adjacent to trash ruck

125. In 1938 the inlet channel to the outlet works was staked by defendant and excavated by plaintiff to the approximate slope grades as specified. In August 1939, the construction engineer determined that borrow pit No. 1 be extended to the vicinity of the inlet channels to both the outlet works and the spillway channel. By letter of October 11, 1939, plaintiff was advised of these changes, and the specific lines and grades to which grading would be required, with maps showing division lines between earth borrow pit excavation under Item 14 at 23 cents per cubic yard, and excavation for construction under contract Item 9 at 35 cents per cubic yard. Plaintiff did not object to these changes.

In November 1939, plaintiff was directed to regrade the slope of the inlet channel of the outlet works from a slope of 2 to 1 as changed to approximately 3 to 1 in the vicinity of the trash rack as far upstream as the riprap extended, and a 5 to 1 slope in the transition into the borrowspit area. Plaintiff protested

this additional excavation and regrading of the slopes. The additional grading was approximately 2,120 cubic yards, which was paid for at earth borrow pit rate of 23 cents per cubic yard.

126. On May 28, 1941, the construction engineer issued extra work order No. 7, requiring additional excavation to change the right side-slope of the inlet channel to the outlet works between the limits of the borrow pit excavation and the upstream toe of the embankment, at the price of 45 cents per cubic yard. Plaintiff did not accept this change because it wanted 45 cents per cubic yard for other yardage in the same general area which had been excavated and paid for at 35 cents per cubic yard.

In his decision of December 29, 1942, the contracting officer allowed plaintiff 45 cents per cubic yard for 2,120 cubic yards of additional grading under extra work order No. 7, less 23 cents per cubic yard which had been paid for this yardage as earth borrow pit excavation. Plaintiff was awarded \$466.40 for 2,120 cubic yards at the net increase of 22 cents per cubic yard. Plaintiff did not appeal from this decision, and now claims \$466.40 for this change. Defendant does not contest this sum, which was allowed by the contracting officer. No part of it has been paid.

### Claim No. 20

Claim for reclassification of excavation of unsuitable materials for cut-off trenches and adjacent foundation areas

127. This claim is for the reclassification of 170,051 cubic yards of excavation, which consisted of the removal of sand from the cut-off trenches and adjacent areas for the foundation of the embankment. Plaintiff claims this material should have been paid for under its contract unit price schedule as cut-off trench excavation under Item 11 at 35 cents per cubic yard, instead of stripping for embankment under Item 3 at 20 cents per cubic yard. The claim is not based on costs nor are the actual costs shown.

The yardage claimed herein includes 8,533 cubic yards of sand excavation which had been reclassified as trench excavation under Item 11 by the contracting officer in his findings of fact and report dated December 29, 1942. The difference in rates between Items 3 and 11 is 15 cents per cubic yard, amounting to \$1,279.95 for the 8,533 cubic yards reclassified. This allowance has not been paid.

128. The contract specifications provide in part:-

44. Stripping for embankment.—The entire area to be occupied by the dam, or such portions thereof as may be directed by the contracting officer, including the areas over the temporary diversion channel, over the outlet conduit, and over the toe drain and cut-off trenches, shall be stripped or excavated to a sufficient depth to remove all materials not suitable for the foundation, as determined by the contracting officer, and only to the lines and grades established by the contracting officer. The unsuitable materials to be removed shall include top soil, all rubbish, vegetable matter of every kind, roots and all other perishable or objectionable materials which might interfere with the bonding of the embankment with the foundation or the proper compacting of the materials in the embankment or which may be otherwise objectionable. All stripped materials shall be disposed of a "royided in paragraph 53.

Paragraph 53 of the specifications relating to the disposition of materials from all required excavations and stripping is as follows:

Suitable materials from all required excavations and from all foundation stripping operations shall be used in the embankment, for backfill, or for other parts of the work. Excavated materials which are unsuitable for the above-described purposes and all unsuitable materials removed in stripping operations shall be wasted. \* \* The cost of disposing of all excavated materials that are wasted and of all other work described in this paragraph shall be included in the unit prices bid in the schedule for excavation and stripping. \*

Paragraph 5, Quantities and unit prices, and paragraph 30, Right to change location and plans, are quoted under finding 14 herein. Paragraph 48, Excavation for embankment toe drain, and cut-off

trench, is quoted in part under Claim 4, Finding 52; which quotation applies in like manner to Claim 20. This specification also provides:

Measurement, for payment, of the excavation for the trenches described in this paragraph will be made only to the lines shown on the drawings or established by the contracting officer, below the level of the embankment foundation after stripping, and payment for such excavation will be made at the unit prices per cubic yard bid in the schedule for excavation for embankment toe drains and cut-off trench.

Contract drawing 191-D-44 contains the location and log of drill holes and test pits of explorations in the construction area. Test pits Nos. 6 and 21 at the approximate center of the embankment foundation show minor strata of sand. These strata appear in test pit 6 at a depth of about 15 to 20 feet and in test pit 21 at a depth of about 8 to 12 feet. In no other areas do test pits expose any appreciable amount of sand which might be encountered.

129. The purpose of the cut-off trench and the placement therein of compacted impervious material was to provide an impervious seal projecting below the foundation of the dam to prevent the seepage of water under the embankment. Concrete cut-off walls were constructed in the cut-off trench from both left and right abutments several hundred feet toward the center of the dam. These walls were constructed on bed-rock, preventing seepage of water from the sides of the embankment.

The stripping of the embankment served a somewhat similar purpose by providing for the removal of unsuitable material from the remaining foundation of the embankment in order that the impervious material thereafter placed upon the embankment would form a proper bond with the dam foundation.

130. There were three general areas where substantial sand deposits were encountered. These areas not only involved excavation within the cut-off trench areas, but extended over a substantial portion of the embankment foundation; both upstream and down-

stream within the following areas designated by the embankment axis stations which were numbered from the left abutment:

(a) Approximate stations 5 + 50 to 9 + 10 to the left of the river channel.

(b) Approximate stations 12 + 25 to 16 + 97 on the right side of the river channel.

(c) Approximate stations 22 + 00 to 25 + 00 in the area of the diversion channel and to the right thereof.

The corresponding stations along the cut-off trench are: (a) approximate stations 15+00 to 18+92, a distance of about 400 feet on the left side of the river channel; (b) stations 22+05 to 26+86, a distance of 481 feet immediately right of the river channel; and (c) approximate stations 32+00 to 34+75, a distance of approximately 275 feet, in the vicinity of the diversion channel and to the right thereof.

131. Stripping of the foundation area was commenced in May 1938. It was started on the right side of the river and progressively extended across the embankment area to the river channel. As unsuitable material was stripped from the foundation, construction areas were staked out for excavation in order that concrete work could be started, and the foundation prepared for the placing of embankment thereon. The stripping operations exposed considerable sand in the area (c) adjacent to the diversion channel. The excavation for the diversion channel was to be performed as early as possible in order to divert the river and prepare the foundation for the placement of embankment over the old channel, along with the construction of other portions of the dam.

Upon the discovery of sand in this area and prior to setting the slope stakes for the cut-off trench, plaintiff was directed to excavate an exploration trench at right angles to the axis of the dam across the embankment area. In performing this work substantially greater quantities of sand were discovered than defendant's engineers had anticipated. A board of engineers from the main office of the Bureau of Reclamation in Denver came to the site late in June 1938 to inspect these sand deposits. Plaintiff was told to extend the excavation in this sand area as far as possible in order that the engineers might be able to make proper determination of

its extent for later operations. It was found that the sand deposits extended substantially across the area for the diversion channel. This exploration trench extended through the

axis of the dam and upstream across the area of the cut-off trench. Plaintiff was paid for the sand excavation involved within the diversion channel at 35 cents per cubic yard under Item 4 of its contract unit price schedule, but only to the width and depth specified in the contract drawings for diversion channel excavation. Plaintiff was also paid for trench excavation involving the removal of a portion of the sand in the area of the cut-off trench. Approximately 24,119 cubic yards of sand removed in the exploration trench, which also involved the cut-off trench, was paid for as stripping at 20 cents per cubic yard under Item 3 of its contract unit price schedule. Plaintiff claims that the construction engineer agreed to pay for the exploration trench excavation at the rate of 35 cents per cubic yard, which was the unit price for cut-off trench and diversion channel excavation.

132. Cut-off trench excavation was started from the right abutment and was continued thereafter toward the left abutment following stripping operations. The first section from approximate cut-off trench stations 50 to 46 + 80, was staked out June 20, 1938. The next section of the cut-off trench from approximate station 46 + 80 back to station 35 + 00 was staked out for excavation June 24, 1938. The area involving the exploration trench between approximate stations 35 + 00 to 33 + 50 was not staked out until June 27, 1938. The area beyond this, between stations 33 + 50 and 27 + 00, was staked for excavation June 25, 1938. traversed the diversion channel and part of the sand pocket in this area. When this latter area had been excavated heavy rains occurred which filled the cut-off trench with water 12 to 15 feet deep. The remaining area of the cut-off trench over to the river channel from Station 27 back to 22 + 04 was staked for excavation July 13, 1938. It was in this area (b) that plaintiff encountered substantial quantities of sand in extending the cut-off trench to the river.

Defendant contends that sand was known to exist in this area and that the cut-off trench was staked for excavation to accommodate plaintiff so that the trench could be excavated and the 181 area which had been filled with water could be drained by gravity to the river channel. While the excavation of the cut-off trench from approximate station 27 to the river channel did serve the purpose of draining the trench from the right abutment it appears that the staking of this portion of the trench was merely the next section of its extension which had been progressively staked from the right abutment to the river channel during the period. June 20 to July 13, 1938.

The initial stripping in the 500-foot stretch between stations 22 and 27 did not disclose the sand which was encountered by plaintiff when excavating the cut-off trench. Approximately 4 feet of suit-

able material overlaid the stratum of sand and this suitable material was excavated and used in certain areas of the embankment. The sand pocket extended from about 2 to 8 feet below the stripping to a depth of about 30 feet.

133: After the discovery of sand in this area the construction engineer decided to abandon this section of the cut-off trench and

first remove all sand from the foundation area.

Defendant's engineers set flags, not slope stakes, as a guide for plaintiff to excavate sand from the foundation in the (b) area on the right side of the river channel for about 500 feet along the cut-off trench. This sand excavation extended across the axis of the dam and down to the area where Zone 3 material was specified. Since the downstream toe of the embankment called for pervious material, sand was not removed from the foundation under this area. The flags were removed from time to time by defendant's engineers until all the sand in the area was excavated to suitable foundation material for embankment construction.

134. Plaintiff excavated approximately 97,655 cubic yards of material in (b) area which was paid for as stripping. In his final decision in this dispute, the contracting officer awarded plaintiff 8,533 cubic yards of material as trench excavation, since the original trench, later abandoned, was excavated by plaintiff after it was staked out by defendant's engineers. As stated above, plaintiff has not been paid on the basis of this award. The allowance of 8,533 cubic yards represents excavation of the original cut-off trench in

this area having a width of 15 feet at the bottom, as specified in drawing 191-D-46, approximately 16 feet deep and 480 feet long. The final trench in this area extended to depths of

about 25 to 45 feet.

In addition to the primary french, which was constructed along the line of the original trench that was abandoned, the Government directed the construction of a secondary trench from approximate cut-off trench station 30, about the center of the dam, across the river channel to approximate station 17 on the left side of the river. This secondary cut-off trench was approximately 100 feet closer to the axis of the dam than the primary trench, and intersected the axis at a proximate station 15+50, opposite trench station 25+50 to the right of the river channel. The primary trench as ultimately constructed was substantially wider at the bottom in this area and would have been approximately 100 feet wide at the top on a 1 to 1 slope. The primary and secondary trenches, however, were restaked after the overlying pervious sand was entirely removed. Further excavation for the cut-off trenches was only approximately 15 feet into the impervious material below the layer of sand.

. 135. During September 1938 plaintiff stripped the embankment area on the left side of the river channel. As soon as this area was stripped the cut-off trench was staked for excavation from the left

abutment to approximate axis station No. 7, which was at about cut-off trench station 16+50. The evidence does not show the date the cut-off trench was staked between stations 16+50 and 17+91. On September 24, 1938, defendant's engineers staked the cut-off trench for excavation from station 17+92 to 18+91 immediately left of the river channel. The river channel was stripped during the first half of October 1938, and cut-off trench slope stakes were set across the river channel on October 25, 1938, between stations 18+91 and 22+04, completing the trench from the left abutment to the right side of the river channel. The primary cut-off trench across the channel was excavated and refilled with impervious material November 1, to 15, 1938. Trench excavation was also centinued in the fall of 1938 from the left abutment down toward the river channel. This excavation was resumed in May of 1939.

136. Between cut-off trench stations 15 and 19, a distance of about 400 feet to the left of the river channel, a large pocket of sand was encountered from approximate elevation 7.575 down to 7.550, or about 25 feet, referred to as area (a) in Finding 130. This sand pocket also extended upstream to the toe of the embankment and downstream across the axis of the dam. The material was very pervious and unsuitable for embankment use. It was largely wasted. This sand pocket was overlaid with approximately 12 to 15 feet or material suitable for placing in the embankment. Plaintiff excavated approximately 77,978 cubic yards of sand and other material in this area, which was paid for as stripping under Item 3 of its contract unit price schedule at 20 cents ρer cubic yard.

It was in this area that plaintiff encountered considerable seepage of water between the sand deposit and the impervious material below. This layer of sand extended upstream under the reservoir which fact, it was believed, increased the water seepage in this area. Also between trench stations 15 and 18, or approximate axis stations 5+50 to 8+40, plaintiff was required to deepen the cut-off trench in order to extend the cut-off wall from axis station 4+75 to approximate station 7+50. The deepening of the cut-off trench in this area was the subject of plaintiff's claim No. 4 herein. The installation of drains in the bottom of the trench and at approximate elevation 7,550 feet is involved in plaintiff's Claims 6 and 10.

The excavation of sand in this area extended to a depth of approximately 40 feet below the original stripping line. The grade on the left side of the river channel from approximate cut-off trench station 19 back to station 17 + 50 was very steep. It extended from approximate elevation 7,580 feet up to approximate elevation 7,588 feet in this area.

137. Plaintiff or ally protested the payment for this material under the classification of stripping. On June 17, 1939, when sand

excavation had been substantially completed plaintiff wrote the construction engineer protesting the classification of this sand excavation and requesting the quantities involved as determined by the

defendant's engineers by cross-section measurements. On 184 December 11, 1939 plaintiff submitted its claim for the reclassification of 176,460 cubic yards which had been paid for under item 3 of its contract unit price schedule as stripping at 20 cents per cubic yard. Plaintiff claimed that this material should have been classified as trench excavation under item 11 at 35 cents per cubic yard.

The sand excavated from the several areas was determined to be unsuitable for embankment use and was wasted upstream in the reservoir area. However, substantial quantities of suitable material, which were excavated in the trench areas above the sand pockets, were used in the embankment. Defendant contends that the quantities used in the embankment were only about 2% of the aggregate and that none of it required separation. Plaintiff contends that a substantial quantity of suitable material excavated from above the sand pockets in the trench area was separated, and used in the embankment. Neither side has furnished actual measurements from which a quantity determination of suitable material could be made. Suitable materials overlay the sand about 2 to 8 feet on the right side of the river channel and 8 to 16 feet on the left side.

138. At a conference in August 1940 involving this claim, the contracting officer determined that plaintiff was entitled to trench excavation of sand involved in the cut-off trench from the left abutment to approximate axis station 7° + 36 or trench station 16 + 75. It was conceded that this area had been staked out for trench excavation immediately after the left side of the embankment area was stripped. Plaintiff was allowed reclassification for 29,701 cubic yards of material previously paid for as stripping. As a result of this determination, 29,523 cubic yards were reclassified as cut-off trench excavation in the final voucher and were paid for at 35 cents per cubic yard, and 178 cubic yards of this material was reclassified as rock excavation and paid under contract unit price item 12 at \$2 per cubic yard.

139. Plaintiff excavated approximately 48,277 cubic yards of sand from approximate cut-off trench stations 16 + 75 to 19 + 00 on the left side of the river channel, which was not reclassified. This sand excavation was not only in the cut-off trench areas, but extended upstream to the toe of the embankment and down-

stream beyond the axis of the dam. The secondary cut-off trench, which was constructed across the river channel, intersected the axis of the dam at approximate station 7 + 50, to the left of the river channel. Sand encountered in this area was exca-

vated from above the cut-off trenches and over the entire area

between the primary and secondary cut-off trenches.

140. In his findings and report of December 29, 1942, the contracting officer awarded plaintiff \$1,279.95 by a reclassification of 8,533 cubic yards of sand excavation from the original trench in area (b) on the right side of the river channel. This allowance was confirmed by the Secretary of Interior in his decision dated July 7, 1943. As previously stated, plaintiff has not been paid anything

upon this reclassification and award.

141. Plaintiff excavated sand and overlying suitable materials from its cut-off trenches and adjacent areas on the left side of Pine River for approximately 400 feet, referred to as area (a). This excavation was performed to a depth of about 40 feet below the original stripping line and amounted to approximately 77,978 cubic yards; all of which was first classified as stripping. The construction engineer later reclassified 29,701 cubic yards of this material as trench excavation, and plaintiff was paid for the difference in price in its final voucher. The remaining 48,277 cubic yards is claimed for reclassification. The unsuitable sand pocket was not encountered in this area until after trench slope stakes were set, and excavation of the trenches was in progress.

142. After the discovery of pervious sand to the right and left of the river channel, which extended upstream into the reservoir area, defendant's engineers decided to construct a secondary trench, about 100 feet downstream from the primary trench and closer to the axis of the dam. This secondary trench, about 1,300 feet in length, was constructed from a point about 800 feet to the right of the river channel, across the channel and about 200 feet beyond the left side of the channel. Sand excavation was performed from

the entire area of both the primary and secondary trenches.

143. Phintiff has been paid under Item 11 at 35 cents per cubic yard for all the excavation of cut-off trench performed below the

level reached after the removal of the unsuitable material.

With payment at such price for the 8,533 cubic yards involved in the excavation of the cut-off trench between the river channel and the diversion channel, first dug and then abandoned, which yardage has been reclassified by the contracting officer, plaintiff will have been paid at 35 cents per cubic yard for all cut-off trench excavation actually performed as such.

It has also been paid at 35 cents per cubic yard for the material removed from the diversion channel as its dimensions are shown

on the contract drawings.

This leaves in controversy 161,518 cubic yards of material removed from areas above and adjacent to the areas of cut-off trench and diversion channel. The operation involved in the removal of this material does not appear to come clearly within the definition of either stripping or trench excavation. The term stripping

would not normally be applied to the excavation of areas of such depth and magnitude requiring exploratory methods to determine their extent. On the other hand such operation did not involve excavation within a confined space or trimming to slope lines as in trench excavation. The material for the most part was easily handled and a high percentage of it was wasted with a comparatively short haul. Excavation in the spillway supstream from station 15 +00, requiring no separation, and borrow excavation appear comparable to this operation. Both carried a contract price of 23 cents per cubic yard.

If this price be applied, plaintiff is entitled to recover on this claim;

161,518 cubic yards × \$0.03 or	\$4,845.54
8,533 cubic yards × \$6.15 or	1,279.95
	. why bidden, and the major will be a

## Claim No. 27

6,125.49

# For excavating boulders in stripping and cut-off trenches

144. Plaintiff's Claim 20 involved the reclassification of stripping to cut-off trench excavation. Cut-off trench excavation carried two classifications. Cut-off trench excavation, common was payable under item 9 of the contract unit price schedule at 35 cents per cubic yard, and cut-off trench excavation, rock, was payable under

Item 10 at \$2 per cubic yard. Plaintiff's claim 27 is for 1,206 cubic yards of rock in excess of 1 cubic yard in volume

which had been classified and paid for as stripping at 20 cents per cubic yard, less the 15 cents differential under claim No. 20, or the net difference of \$1.65 per cubic yard, amounting to \$1.989.90.

145. In his reclassification of some 29,701 cubic yards from stripping to cut-off trench excavation, the contracting officer reclassified and paid for approximately 178 cubic yards of it as rock excavation in the cut-off trench at \$2 per cubic yard. The remainder was reclassified as common excavation in trenches. The ratio of rock was .6 of one percent which plaintiff claims here on a total of 201,757 cubic yards (originally claimed for reclassification) amounting to 1,206 cubic yards.

146. Plaintiff did not submit any claim for rock classification in stripping until January 1940, after all this work had been performed. The contracting officer denied these claims and he was sustained by the Secretary of Interior upon appeal by plaintiff.

## Claim No. 31

For excavating and backfilling below the top of walls downstream from station 15 + 00 in spillway

147. Plaintiff claims payment for excavation in the spillway beyond the theoretical lines of the 1939 slope stakes and below the top of the spillway walls, as well as the backfill required for the same. Plaintiff contends that the removal of loose boulders required excavation beyond the neat lines established by defendant's engineers and that it is entitled to payment to the most practical dimensions to which excavation was performed.

Plaintiff claims payment for 2,763 cubic yards of excavation consisting of (a) 1,993 cubic yards of earth excavation that was separated for use in the embankment at 35 cents per cubic yard, amounting to \$697.55; and (b) 770 cubic yards of rock at 60 cents per cubic yard, amounting to \$462; also (c) backfill of 2,763 cubic yards at 50 cents per cubic yard, amounting to \$1,381.50; and (d) 2,763 cubic yards of earth borrow pit excavation at 23 cents per cubic yard, amounting to \$635.49, totaling \$3,176.54.

188 148. The contract specification provides in part:

41. Classification of excavation.—Except as otherwise provided in these specifications, all materials moved in required excavations for the dam and appurtenant works will be measured in excavation only, to the neat lines shown on the drawings or prescribed by the contracting officer, \* \* \*

43. Open-cut excavation, general.—\* \* That for any required excavation where, in the opinion of the contracting officer, the conditions warrant, the excavation will be measured for payment to the most practicable dimensions and lines as staked out or otherwise established by the contracting officer:

\* If at any point in common excavation material is

If at any point in common excavation, material is excavated beyond the neat lines required to receive the structure, the overexcavation shall be filled with selected materials, in layers not more than six inches thick, moistened and thoroughly compacted by tamping or rolling in a manner satisfactory to the contracting officer. It at any point in common excavation the natural foundation material is disturbed or loosened during the excavation process or otherwise, it shall be consolidated in a manner satisfactory to the contracting officer, or, where directed by the contracting officer, it shall be removed and replaced with selected material compacted to the satisfaction of the contracting officer. Any and all excess excavation or overexcavation performed by the con-

tractor for any purpose or reason, except as may be ordered in writing by the contracting officer, and whether or not due to the fault of the contractor, shall be at the expense of the contractor.

46. Excavation for spillway.—\* \* All excavations shall be made to the lines, grades, and dimensions shown on the drawings or established by the contracting officer and in accordance with the provisions of paragraph 43. The contractor shall be entitled to no additional allowance above the unit bid in the schedule for excavation for spillway by reason of changes in the lines, grades, and slopes of required excavations, though changes in the quantities of excavation will be covered in the estimates. \*

50. Backfill about structures. Material used for backfill will be measured in place about the structures and to the lines of the required backfill as established by the contracting officer,

149. On April 11, 1939, defendant submitted to plaintiff by letter certain revised drawings involving slight changes in the spillway gate structure which necessitated some additional grading of the spillway below the gate structure. In May, 1939, the spillway channel was restaked for sloping.

Original drawings showed tile drains located adjacent to the back; side of the cantilever wall and on top of the wall footing. The excavation was originally staked to lines one foot outside the neat line of the concrete. On May 15, 1939, revised drawings were submitted to plaintiff showing a change in the location of the drains to the outside edge of the wall footing. Additional excavation was performed to provide for the relocation of these drains. Order for changes No. 5, dated April 12, 1941, awarded plaintiff the lump sum of \$2,450 for this additional excavation. This order was not accepted by plaintiff because it involved an additional claim for gravel, and is now included herein under claim No. 5. Approximately \$59 cubic yards of additional excavation was performed to permit the installation of these drains outside the wall footing.

Extra work order No. 4, dated April 6, 1940, provided for the removal, cleaning and relaying of substantially all of these 8-inch drain pipes for the lump sum of \$1,135, which was accepted by plaintiff and paid for. A very small portion of the overexcavation claimed here resulted from the removal and replacing of these drains.

Under Claims 7 and 8 herein, plaintiff claims compensation for

the installation of 4-inch tile drains along the outlet channel, one of which traversed the spillway channel. Plaintiff later connected this drain to the permanent 8-inch drain in the spillway, necessitating additional excavation of approximately 160 cubic yards of material which is a portion of the yardage involved herein.

Claims 33 and 37 are concerned with that portion of the spillway upstream from station 15 + 00, and are not involved with the yard-

age claimed here.

190 150. The excavation, spillway construction and backfill involved here were completed during 1939. By letter of March 13, 1940, plaintiff inquired of the construction engineer the basis of yardage allowances for the excavation and backfill in the downstream portion of the spillway. By letter of April 8, 1949, defendant's construction engineer advised plaintiff that measurements were based on slope stakes set at 1½ to 1 above the top of the walls and 1 to 1 below the top of the walls except where rock was involved, in which case the slope was ½ to 1; and that payment for all spillway excavation below the top of the walls was to actual excavated lines, except where the excavation extended beyond the 1939 theoretical slope, in which case payment was made to the 1939 theoretical slope.

It was established by the evidence in this case that payment for rock excavation was also on the basis of measurement on 1 to 1 slopes below the top of the walls, since the slope stakes had been set on a to 1 slope. The existence of rock in this area was unknown

until it was encountered during the excavation.

151. On June 26, 1940, plaintiff submitted to the construction engineer its claim for \$2,588.65 for additional 2.819 cubic yards of excavation, represented by 2,049 cubic yards of earth, which was separated and used in the embankment, at 35 cents per cubic yard, 770 cubic yards of rock at 60 cents per cubic yard and backfill of

2,819 cubic yards at 50 cents per cubic yard.

By letter of December 3, 1941, plaintiff revised its claim to \$3,176.54 after checking defendant's notes and cross sections upon which allowances were computed in the final voucher. The Government had deducted 2,763 cubic yards of earth borrow pit excavation to compensate for the backfill below the top of spillway walls which had been over-excavated. Plaintiff revised its claim to 1,993 cubic yards of earth excavation, 770 cubic yards of rock excavation and 2,763 cubic yards of backfill. Claim was also made for 2,763 cubic yards of earth borrow pit excavation at 23 cents per cubic yard, which had been deducted from yardage excavated by plaintiff.

191 Defendant admits that the overexcavation was separated and used in the embankment, which displaced a like amount of borrow material that was used in the backfill because of overexcavation; and, but for material used from overexcavation, plain-

tiff would have had to excavate 2,763 cubic yards of additional borrow pit material.

- 152. The contracting officer denied plaintiff any recovery upon its claim in his decision dated December 29, 1942. This report states in part:
  - 7. \* \* Payment has been made to the lines as prescribed by the contracting officer, and there is no basis under the specifications for the allowance of excavation to any other lines.
  - 8. \* \* The neat lines, as staked, were the lines of required backfill and, therefore no payment can be made for backfill of överexcavation or for the borrow material used therefor.

The decision of the contracting officer was sustained by the Secretary of the Interior on July 7, 1943.

153. Plaintiff contends that excavation of the spillway channel below the top of the walls was made to the most practicable dimensions, and relies upon that provision in paragraph 43 of the specifications for payment of this excavation and the required backfill. Plaintiff has not submitted the specific yardage involved in the several areas where overexcavation occurred, although cross sections were filed at plaintiff's exhibits 14-A and 31-A in this case.

A ridge of rock extended across the spillway between stations 18 + 75 and 21 + 00. No one knew the rock existed in this area until it was encountered by excavation. The Government engineers staked the entire channel on a 1 to 1 slope below the top of the wall. Payment was actually made by measurement on this slope. Plaintiff found it impossible to excavate to neat lines in this area. After plaintiff excavated to what it believed were the required slopes, defendant's engineers directed the further removal of nests of boulders which might become hazardous to the workers engaged on the form work and wall construction below. Heavy rains which occurred after excavation washed out the fine materials and other groups of boulders had to be removed. Where rocks were firmly embedded, even though they protruded inside the plane of

stantial portion of the overexcavation was involved in this area. Mowever, the overexcavation of ledge rack was actually paid for on a slope plane of 1 to 1, and not ½ to one as suggested in the construction engineer's letter of April 8, 1940, and upon which plaintiff computed its excess rock. The total rock yardage in overexcavation was only 275 cubic yards, and not 770 cubic yards. All boulders removed in excess of 1 cabic, yard were measured separately and paid as rock excavation.

154. Defendant contends that a part of the overexcavation oc-

curred on the left side of the spillway channel between stations 15+30 and 25+50 where plaintiff constructed a hauling ramp. The Government allowed plaintiff some 2,232 cubic yards of over-excavation from above the top of the wait in this area, for the reason that defendant's engineers failed to remove the 1937 reference stakes which contributed to this error. The error in selecting the 1937 stake would contribute to overexcavating below the top of the wall and the construction of the ramp beyond the slope grade.

155. Approximately 160 cubic yards of overexcavation was involved between approximate stations 15+15 and 19+50 on the right side of the channel, for the connection of 4-inch drains involved in Claims 7 and 8. This excavation was necessary in order to connect the 4-inch drains with the permanent 8-inch drains in the spillway channel.

156. Plaintiff excavated approximately 859 cubic yards beyond the wall footings between stations 14+50 and 19+00 on the left side and 17+04 and 18+57 on the right side of the spillway channel in order to place the permanent tile drains outside the edge of the concrete footing, under order for changes No. 5. Plaintiff was awarded \$2,450 for this excavation and now claims this sum under Claim No. 5 herein, which defendant does not contest. The allowance under order for changes No. 5 was for excavation only, and does not obviate the necessity for backfilling this over-excavated area.

157. Plaintiff's overexcavation was separated and used in the embankment. Measurements for excavation were made in 25-foot cross-section areas. Yardage was calculated by defendant's engi-

neers to actual lines, except where the excavation extended 193 beyond the 1939 slope stakes. In such instances the yardage allowed was held to the absolute neat lines of the slope as staked.

The overexcavation involved herein was not due to carelessness or negligence on the part of plaintiff.

158. Plaintiff was not paid for any of the backfill for over-excavation back of the concrete walls, totaling 2,763 cubic yards. Defendant also deducted 2,763 cubic yards of earth borrow-pit excavation performed by plaintiff to compensate for the backfill of the overexcavation, although it concedes that a like quantity of materials from overexcavation were used in other embankment construction.

Plaintiff excavated 2,763 cubic yards of material in the spill-way channel for which it has not been paid. Approximately 859 cubic yards are included in Claim 5. The remaining 1,904 cubic yards consisted of 1,629 cubic yards of earth excavation, with a value of 35 cents per cubic yard under Item 7 of the contract unit-

price schedule, and 275 yards of rock excavation having a value of 60 cents per cubic yard under Item 8 of this schedule, or a total value of \$735.15.

The contract value of backfill behind the spillway walls is 50 cents per cubic yard under Item 17 of the unit-price schedule, or \$1,381.50 for 2,763 cubic yards.

The value of 2,763 cubic yards of earth borrow-pit, excavation at 23 cents, per cubic yard under Item 14 of the contract unit

price schedule is \$635.49.

The total value of performance, not otherwise claimed herein, is \$2,752.14. Of this amount the sum of \$743.87 represents payment at 50 cents per cubic yard for backfill and 23 cents per cubic yard for borrow for the 1,019 cubic yards of overexcavation referred to above in Findings Nos. 155 and 156.

# Claim No. 33

Extra costs allegedly caused by change in plans for extra width in the spillway between stations 6 + 90 and 12 + 12

159. Paragraph 30 of the contract specification relates to changes in location and plans. Paragraphs 43 and 46, parts of which are quoted under Claim 31 herein, also relate to the change involved

here.

from the Chief Engineer in Denver, Colorado, certain drawings showing the construction details for the spillway between stations 6 + 90 and 12 + 12, an area of about 522 feet in length. These drawings required the widening of the bottom of the spillway to accommodate a wider base for the cantilever wall, and to permit the placing of tile drains outside the edge of this wall footing. They also required slightly greater depth for the wall, footing.

162. As soon as these drawings were received they were presented to plaintiff's superintendent Stewart for examination. Upon examination Stewart advised the construction engineer that the changes indicated would involve extra costs for which plaintiff should be compensated. Thereupon the following telegram was transmitted to plaintiff, dated April 2, 1940:

Spillway plans call for extra width between stations 6+90 and 12+12 and agreed price for this and tile drain above station 14+50 must be obtained from you in advance of performance of work.

On April 4th a set of the revised drawings were furnished plaintiff. On the same day plaintiff submitted its proposal of \$1 per cubic yard for additional earth excavation, \$5 per cubic yard for the rock and \$2 per linear foot for placing the tile drains; with the provision that should these rates exceed its costs plus 10 percent for overhead and profit, then plaintiff would reduce its rates accordingly.

The wall footings were excavated to such depths that no additional trenching was required for placing tile drains outside the edges of the footings, and plaintiff's claim herein does not involve

extra costs for the placing of tile.

161. Plaintiff's proposal was declined, and plaintiff was directed to perform the work as changed. Plaintiff objected to performing the work at contract unit rates, and advised the construction engineer by letter of April 29, 1940, that it would keep costs of all additional work caused by the change, and asked that the Government keep similar costs as they were incurred. By letter of May 3rd, 1940, the construction engineer accepted plaintiff's protest

for record under paragraph 14 of the specifications.

195 162. Plaintiff contended that the spillway excavation in the area involving the change had been excavated substantially to grade, except where rock was encountered near the gate structure. On April 3, 1940, defendant's engineers surveyed the area to be widened and determined that additional excavation near the toe of the slope and the bottom of the channel was approximately 4,272 cubic yards, calculated on a slope of 1 to 1 grade as originally staked by the defendant; of which 2,729 cubic yards was calculated as rock excavation and 1,543 cubic yards as earth excavation. The result of these cross-sections was shown to Mr. Wunderlich, who was at the site at the time, and it was pointed out to him that considerable original work remained to be done, and that the widening operations would not involve much greater yardage.

163. The construction engineer determined that the material in this area was of such character that it would be retained at almost a vertical angle. The lower portion of the banks were re-staked at a slope of ¼ to 1, and plaintiff was directed to widen the chan-

nel on this grade.

In order to excavate the earth at this grade plaintiff employed a bulldozer and tractor, and a grader with the blade set almost vertically against the slope to be cut away. This unit would cut 3 or 4 inches with each pass, and the operation was continued until the banks were cut back to the desired lines. The material cut down in this fashion was thereafter removed by carryall scrapers and trucks. By this method the bank was left very steep, but it did not break loose. Had the change been made before the channel was substantially exeavated, most of the widening cut could have been made with the power shovel with much greater progress.

Plaintiff removed the rock in a small area which required widen-

by the same methods and tools regularly employed for this

work. Compressors and jackhammers were used.

164. The excavation for which plaintiff was paid after the widening change and the restaking of the grade on a 1/4 to 1 slope was 4,419.5 cubic yards. It included 1,687 cubic yards of earth excavation at 23 cents per cubic yard and 2,732.5 cubic yards of rock at

60 cents per cubic yard, totaling \$2,027.51. The net increase in yardage was 144 cubic yards of earth and 3.5 cubic yards of rock having a contract value of \$35.22, for which plaintiff

received payment.

The additional yardage remaining to be excavated on the original slope of 1 to 1 was not all removed because of the change in the slope to ¼ to 1 when the widening change was ordered. The yardage involved in the widening operation was not separately determined, and plaintiff was paid only for actual excavation crosssectioned on the new slope as restaked.

165. On December 3, 1941, plaintiff submitted its extra cost of the additional work involved in widening the spillway as directed by the construction engineer in the sum of \$1,360.72. This claim was denied by the contracting officer in his decision of December 29, 1942, on the ground that the Government had a right to change the location and plans of the work and that plaintiff had been paid the contract unit price of the increase in yardage involved. His decision was sustained by the Secretary of the Interior upon appeal by plaintiff. .

166. Plaintiff's costs were increased by the change in width of the spillway channel between stations 6 + 90 and 12 + 12. a result of the concurrent change in the slope of the excavation remaining as originally staked, part of this yardage was not required to be excavated, and plaintiff's net increase in yardage had

a contract value of only \$35.22 which plaintiff received.

Plaintiff's costs of the additional widening operations, with allowances for equipment used at the maximum use rate determined in Finding 17 herein, was \$1,009:29: Its recovery upon net increased yardage involved was \$35.22. Plaintiff's excess costs were \$974.07.

## Claim No. 34

.Cost of re-excavating and backfilling cut-off trench for cut-off wall at junction with spillway footing, at right abutment

167. The cut-off wall on the right abutment was specified in contract drawing 191-D-46 to join the base of the concrete gate structure of the spillway. Both the cut-off wall and the spillway gate structure were to be constructed on bedrock.

In 1938 the cut-off trench was staked by defendant's en-197 gineers for excavation to the junction with the spillway. It O

was excavated by plaintiff as staked by defendant. Plaintiff's concrete subcontractor was to install the concrete cut-off wall and the spillway concrete work.

The construction engineer directed plaintiff to terminate the cut-off wall approximately 11½ feet short of its point of junction with the base of the spillway structure, because of contemplated changes in the alignment of the spillway.

168 Plaintiff planned to complete the cut-off wall on the right abutment in 1938, and would have completed it except for defendant's order to terminate the wall before completion. Plaintiff's progress program scheduled the upstream construction of the spillway and gate structure in 1940.

It was defendant's practice to prepare and furnish to plaintiff detail drawings affecting the various features of the work in harmony with plaintiff's progress schedule, and to adopt such changes as were found necessary to fit conditions disclosed by the excavation. It was believed that a change in alignment of the spillway structure would be necessary. For this reason defendant's engineers stopped the cut-off wall construction short of its junction with the spillway foundation structure as then designed.

The gate structure was ultimately moved downstream approximately 30 feet from the originally designated location, but the alignment was not changed, and the cut-off wall was later extended to the junction with the spillway foundation substantially the same distance as first indicated.

169. Since the spillway foundation was not planned until 1940, plaintiff decided to refill the open trench to avoid hazard and obstruction to its other construction operations, and to prevent the accumulation of a deep pool from surface drainage. Defendant's engineers required that the refill be compacted in like manner as other embankment in the cut-off trench. Plaintiff was paid for this excavation of the cut-off trench and embankment fill at the contract rates applicable to other portions of the cut-off trench where the cut-off wall had been constructed. Plaintiff knew that this portion of the cut-off trench would have to be re-excavated for

the completion of the cut-off wall; and defendant also knew 198 this, although payment was made in full for the work performed by plaintiff, as directed.

170. The detail plans for the gate structure had not been completed until late in 1939. All excavation for the upstream channel of the spillway had been completed in May 1940. In June 1940, defendant staked that portion of the cut-off trench for the completion of the cut-off wall to the junction with the spillway foundation on a very steep slope for re-excavation. The area was about 20 feet long, 20 to 30 feet deep and about 15 feet wide at the bottom. The compacted material was difficult to excavate.

This re-excavation was performed in June 1940, and the cut-off wall was completed in July 1940. The backfill was performed from July 8 to 18, 1940. Plaintiff or ally protested performing the backfill at the rate of embankment fill, Item 19 of its contract unit price schedule, at 5 cents per cubic yard, because of the confined area and the necessary use of hand tamping tools for much of this work. Backfill about structures was payable at 50 cents per cubic yard, under Item 17.

The specification provides in part:

50. Backfill about structures.—Backfill is defined as excavation refill or embankment material that is required to be placed under these specifications and which can not be deposited around the structures or in adjacent embankments until the structures are completed: Provided, That embankment material surrounding or abutting the concrete cut-off walls, spill-way structure, trash-rack structure, outlet conduit, spiral-stair-way shaft, and other structures or parts of structures against which compacted dam embankment is placed after the construction of the structure, will be classified as embankment and will not be paid for as backfill.

171. By letter of July 10, 1940, plaintiff protested performing the work at regular contract rates, claiming this work was performed under changed conditions for which it would claim its costs plus 10 percent under paragraph 10 of the specifications. Plaintiff was not paid anything for the re-excavation nor for the backfilling of the area involved herein.

On December 3, 1941, after allowances had been calculated 199 by defendant for its final payment voucher, plaintiff submitted its claim for re-excavating and re-backfilling the cut-off trench at its junction with the spillway structure, on the basis of its cost plus 10 percent for overhead and profit, in the sum of \$997.92.

In his decision of December 29, 1942, the contracting officer denied plaintiff any compensation for the re-excavating and re-backfilling of that portion of the cut-off trench involved herein. The Secretary of Interior confirmed this decision July 7, 1943.

The contracting officer held that plaintiff could be paid but once for the excavating and fill, and that plaintiff knew at the time the cut-off wall was terminated that it would be necessary to reexcavate and re-backfill the area in order to complete the cut-off wall; and that plaintiff's superintendent was told at the time the fill was first placed that it would be paid only once.

172. Defendant contends that plaintiff's superintendent was advised that the work would be paid for only once. Plaintiff contends that defendant's construction angineer agreed to pay for the

re-excavating and re-backfilling and that its protest was for backfilling at embankment rate of 5 cents per cubic yard applicable to cut-off trenches.

Both plaintiff and defendant knew that the trench would have to be re-excavated to complete the cut-off wall when work was stopped on the cut-off wall short of its junction with the spillway structure foundation, and embankment was placed in the open trench.

The volume involved was approximately 400 to 500 cubic yards upon a slope of ½ to 1. Plaintiff's cost of re-excavating and re-backfilling this area was \$610.61, based upon rental of equipment at maximum use during 1940, as set out under Claim 17 herein, as follows:

Labor			\$230.49
Payroll insurance and taxe	ng ·		00 70
Parison mediance and taxe			22.70
Equipment rental			
Ten percent allowance for	or superintenden	ce general evr	onso and
profit	or supermeenden	ce, general ext	rease, and
profit			55.51
Total			610 61
Total			610.61

200

## Claim No. 35

Claim for additional rolling of embankment ordered by the defendant

173. The specifications provide in part as follows:

55. Embankment construction, general.-

(c) Placing. No stones having maximum dimensions of more than five inches shall be placed in the earth-fill portion of the embankment. Should stones of such size be found in otherwise approved earth-fill embankment materials, they shall be removed by the contractor either at the site of excavation or after transporting to the embankment, but prior to rolling and compacting the materials in the embankment.

The mixture of clay, sand, and gravel shall be placed in the earth embankment in continuous, approximately horizontal layers not more than six inches in thickness after rolling as herein specified.

(d) Moisture control.—Prior to and during rolling the material in each layer of the earth fill shall have the optimum practicable moisture content required for compaction purposes, as

determined by the contracting officer, and the moisture content shall be uniform throughout the layer.

(f) Rolling.-When each layer of material has been conditioned to have the optimum practical moisture content required for compaction purposes, as provided in subparagraph (d), it shall be compacted by passing the tamping roller, as specified above, over it 12 times. If the moisture content is greater or less than the optimum for compaction, the rolling shall not proceed except with the specific approval of the contracting officer, and, in that event, additional rolling shall be done, as directed by the contracting officer, to obtain the required compaction, and no adjustment in price will be made therefor. If, with the optimum moisture content, it is found desirable to roll each six-inch layer more or less than 12 times to obtain the desired compaction, the number of rollings shall be changed accordingly, as directed by the contracting officer, and adjustment will be made in the unit price bid for compacted embankments in the amount of 25/100 cents per cubic yard for each additional or less number of rollings required.

201 174. Plaintiff claims additional rolling at the price provided as follows:

12 additional rollings:	
2,652.7 cubic yards at 3 cents per c. y	\$79.58
6 additional rollings:	
94,749.9 cubic yards at 1½ cents per c. y	1,421.25
Total	1,500.83

Plaintiff's claim covers 149 additional rollings ordered by defendant's engineers during the period from May 2d to November 4th, 1940. Plaintiff was not paid for any additional rolling of any part of the embankment, and no deduction was made for rolling any portion less than 12 times.

175. Defendant determined, by laboratory tests for optimum moisture, when each layer of embankment was ready for rolling, after it was spread to the proper depth. Defendant contends that in actual practice the plaintiff did not wait to begin rolling a layer of embankment until the defendant had tested such lift for optimum moisture content; and that 12 rollings were still required after tests disclosed that the materials were unsuitable when rolling was started.

After rolling had been completed the defendant would test each lift for density. In the event the compaction was 2 percent or more

under the maximum density required, additional rolling would be ordered, and if the optimum moisture content was found deficient additional sprinkling was also required.

176. During the period of plaintiff's claim the Government records show that additional rollings were ordered 194 times. In 90 out of the 194 times additional rollings were ordered, tests applied after rolling showed variations in moisture of 1 percent above or below optimum moisture. The defendant contends that failure to attain the required density could have been caused by one or a combination of things, including oversized stones left in the embankment, fill, hifts exceeding the six-inch maximum, broken or worn feet on the rollers, a deficiency of ballast in the rollers, improper compaction at the junction between material tamped and material rolled or failure to complete the required number of rollings.

202 The inspectors' reports of current operations show frequent references to the occurrence of conditions set out above, but defendant is unable to connect the necessity for any particular additional rolling claimed by plaintiff with such reports. Defendant is unable to verify or contravert the yardage claimed by plaintiff

unable to verify or contravert the yardage claimed by plaintiff.

177. Plaintiff contends that rolling of embankment was done when and as directed by defendant's engineers, and only after tests for moisture content had been completed.

There were a number of times that Government inspectors had found insufficient ballast in the rollers. The water had leaked out and was not immediately discovered. Also plaintiff's roller feet became badly worn and the feet were required to be replaced from time to time.

During 1940 all of the embankment material for Zenes 1 and 3 was taken from borrow pit No. 2 and was separated. The construction engineer directed plaintiff to spread the bars on its separating screen so that more stones under 5-inch maximum would be admitted with the embankment materials; and that plaintiff would not be paid for any excess cobbles which were not required in the cobble fill as a result of the separation of materials from borrow pit No. 2. (See Claim 17 herein.)

The excessive quantities of cobbles, even under 5 inches in diameter, caused wear and tear on plaintiff's rolling equipment, and would tend to reduce compaction by the rollers. All of these materials were screened after June 21, 1940. Materials excavated from borrow pit No. 2 from April 22 to June 21, 1940 were separated by rake-dozers on the embankment. Plaintiff's claims show a similar ratio of additional rolling ordered after June 22d, when materials were screened, as before, when they were separated by rake-dozers. No stones in excess of 5 inches would be admitted through the screen.

178. Plaintiff understood that the additional rolling would be paid for under the provisions of the specifications. Upon the receipt of its final voucher, plaintiff determined that no allowance was contained in it for additional rolling. On December 3, 1941, plaintiff submitted its claim for \$1,500.83, which was denied by

the contracting officer in his decision of December 29, 1942, 203 on the ground that plaintiff failed to make its claim in time; since rolling of the embankment had been completed in July 1941; and that it was not possible to verify the yardage involved from data submitted. The contracting officer's decision was sustained by the Secretary of the Interior.

179. Plaintiff's claim is supported by details of sections, widths and stations upon the embankment where additional rolling was performed. Defendant does not controvert the correctness of yardage involved, or the number of rollings performed. Plaintiff claims yardage involved in only 149 additional rollings of a total of 194 ordered by defendant and performed by plaintiff during 1940. The rollings performed as claimed had a contract value of \$1,500.83.

## Claim No. 37

For overexcavation upstream from station 15+00 of the spillway and backfill below the top of walls

180. Plaintiff claims that it performed 1,657 cubic yards of rock excavation between stations 1+75 and 15+00 of the spillway, of which 593 cubic yards were below the top of the walls where backfill was required; and that it was paid for neither the overexcavation nor the backfill. In addition there were deducted 593 cubic yards of borrow pit material at 23 cents per cubic yard which was used in the backfill.

Contract specifications quoted under Claim 31 applies in like manner and effect to Claim 37. Paragraph 41, there quoted in part, states further, in part:

On written request of the contractor, made within 10 days after the receipt of any monthly estimate, a statement of the quantities and classifications between successive stations, or in otherwise designated locations, included in said estimate will be furnished to the contractor within 10 days after the receipt of such request. The statement will be considered as satisfactory to the contractor unless specific written objections thereto with reasons therefore are filed with the contracting officer within 10 days after receipt of said statement by the contractor or the contractor's representative on the work. Failure to file such written objections with reasons therefor within said 10 days shall be considered a waiver of all claims based

on alleged erroneous estimates of quantities or classification of materials for the work covered by such statement.

181. The upstream portion of the spillway was first staked for excavation about May, 1938. Only rough excavation was performed during that year. Due to construction charges, it was restaked about May 1939, but this did not affect that portion of the excavation previously performed. Finally in April 1940, after the channel was largely completed a portion of the upstream channel was again staked for widening the base of the channel to permit additional changes in the concrete work; (See Claim 33.)

The final stakes provided for a very steep slope, about ¼ to 1, but extended only about one-third up the banks of the spillway, and covered less than one-half the length of the channel upstream from station 15+00. The evidence does not show whether the yardage involved herein represented excavation beyond the final stakes set in April 1940, or beyond the 1939 slope stakes. Defendant's assistant engineer Walton could not determine how the quantities claimed were computed.

182. Plaintiff contends that it was impossible to shoot the rock and remove it to exact neat lines established by the Government's slope stakes.

The area involving rock was blasted. It contained scams which broke back beyond the slope lines, and much of it came loose in blocks.

The only written complaint submitted by plaintiff was on September 20, 1940, when a cavedown occurred during the construction of the concrete walls, causing hazard to the workers employed in this work. Plaintiff was directed to remove the loose rock, which was estimated by the construction engineer to be approximately 10 cubic yards.

From time to time plaintiff had been directed to remove rock that had been loosened by other excavation and blasting, regardless of whether it was beyond the neat lines established by slope stakes in this area.

183. After its engineer had checked the cross-section for the final voucher, plaintiff submitted its claim on December 3, 1941, for \$1,427.09. This claim was for 1,657 cubic yards of rock excavation, 593 cubic yards of backfill and 593 yards of borrow pit excavation which had been deducted by defendant because of excess excavation below the top of the walls, requiring the additional backfill.

Plaintiff's claim was denied by the contracting officer December 29, 1942, on the ground that its claim was not submitted within the time specified in the contract, and for the reason that the contract precluded payment for overexcavation, and that the most practical

dimensions were found to be the neat slope lines established. His decision was sustained by the Secretary of the Interior upon appeal

by plaintiff.

184. Defendant's engineer Walton stated in his testimony, page 2145, that no payment was made for overexcavation, backfill of overexcavation or borrow pit excavation required for this backfill. Defendant's proof is that plaintiff's overexcavation below the top of the spillway walls was only 301 cubic yards of rock between stations 5+29 and 6+75; that overexcavation of earth between stations 6+75 and 15+00 was 292 cubic yards, of which 129 cubic yards were removed by plaintiff for its own benefit in constructing a haul road ramp, leaving net overexcavation of earth only 163 cubic yards, and a total overexcavation, below the top of the walls, of 464 cubic yards. This work was completed in 1940.

Plaintiff was allowed and paid for 464 cubic yards of backfill in its September 1941-voucher under tem 17 of its unit price schedule

at 50 cents per cubic yard.

186. Defendant was unable to determine the overexcavation of yardage above the top of the walls. However, the allowance of 1,946 cubic yards of rock excavation in excess of the reclassified common excavation in the spillway upstream from station 15 + 00 in the September 1941 voucher appears to cover Claim 37 herein. No overexcavation in this area is found which has not already been paid for

186. Defendant deducted from plaintiff's September 1941 voucher 593 cubic yards of plaintiff's borrow pit excavation which was required for backfilling overexcavation. The overexcavated materials were used in the embankment and displaced a like volume of borrow pit excavation. Deductions from borrow pit excavation of 593 cubic yards had a contract value of 23 cents per cubic yards

or \$136.39.

206 Claim No. 41

Extra cost of unwatering gate chamber and concreting gate plug

187. On January 9, 1941, the construction engineer submitted to plaintiff order for changes No. 4, dated December 30, 1940, involving changes in the outlet works. The principal change was a provision of a weir wall at the lower end of the outlet-works open channel, for which compensation was provided as follows:

Additional cost of unwatering and concreting gate plug and all other additional cost arising from the changes, at a lump sum payment of \$500.00.

Plaintiff declined to accept the above order for payment, believing it might prejudice its subcontractor's claims involving the outlet works.

· The above order was revised December 30, 1941, to read:

Additional cost of unwatering and concreting gate plug because of the changes, at a lump sum payment of \$500.00.

Payment was not made on the revised order because plaintiff's final settlement voucher had been completed in October 1941.

188. In his decision of December 29, 1942, the contracting officer affirmed the award of \$500 as an equitable adjustment for extra work involved in the foregoing changes in the outlet works. This award is fair and reasonable. Plaintiff now claims the \$500 awarded by the contracting officer. Defendant does not contest this claim.

#### CONCLUSION OF LAW

Upon the foregoing special findings of fact, which are made a part of the judgment herein, the court concludes as a matter of law that the plaintiff is entitled to recover \$172,302.23.

It is therefore adjudged and ordered that the plaintiff recover of and from the United States the sum of one hundred seventy-two thousand three bundred two dollars and twenty-three cents (\$172,-302.23)

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## OPINION

MADDEN, Judge, delivered the opinion of the Court:

The plaintiff is a partnership engaged in the construction business. On March 14, 1938, it made a contract with the United States, which acted through the Bureau of Reclamation of the Department of the Interior, by which it agreed to construct the Vallecito Dam on the Pine River in southern Colorado. It was to be paid unit prices for most items of the work, and the estimated total price of the project was \$2.115.870.

The site of the dam was about 7,550 feet above sea level. It was to be an earth-filled dam about 4,000 feet long at the crest, 600 feet wide at the base, and with a maximum height of about 125 feet. The embankment was to consist of three zones. Zone 1, the upstream zone, and Zone 3, the downstream zone, were to be constructed of pervious and semi-pervious materials, i. e. rock, gravel and cobble stones; Zone 2, in the center, was to contain only impervious material, i. e. earth and only such stones as could be effectively sealed in the earth, leaving no voids. The face of the upstream slope was to be covered with three feet of large stones, riprap. The downstream slope of the dam was to be covered with cobble stones, with a cobble-sluited gravel fill at the downstream toe.

In constructing the dam a deep trench, called a cut-off trench, was to be dug under the place where Zone 2 of the dam was to be located, which trench was to be tamped full of impervious material.

to prevent the seepage of water under Zone 2. At the ends of this trench, at each abutment of the dam, was to be built a concrete cut-off wall, placed on bed-rock. The earth, gravel, and rock for the embankment were to be obtained from the required excavation and from borrow pits, except that the riprap stones were to be obtained from a designated rock quarry.

The normal flow of water out of the reservoir created by the dam was to be through a twin-barrelled concrete conduit through the embankment at the lower part of the right abutment. A control house for the control of the gates of this conduit was to be built on the crest of the dam. The flow through the conduit was to be emptied into an open channel, called the outlet channel, which was to be lined with concrete at the bottom. The outlet channel was to empty, in turn into the spillway channel, at a point about 200 feet downstream from the dam. The spillway channel was to start from a point at the top of the dam, near the right abutment, and to earry the overflow of the reservoir in flood times. It was also to be lined with concrete on the bottom and was to extend about 2,800 feet downstream where it was to empty into the stilling basin, which in turn would overflow into the river. Gates to control the flow into the spillway channel were to be placed at its upper end.

The contract completion date was December 18, 1941. The work was in fact completed in October 1941. Although relations between the representatives of the plainting and of the Government were cordial and cooperative during the performance of the contract, differences of opinion as to what was required of the parties by the contract resulted in the filing by the plaintiff with the contracting officer of a large number of claims. Some 43 claims were excepted from the otherwise final settlement made for the work. The contracting officer thereafter, on December 29, 1942, made his decision on the claims. The plaintiff appealed to the head of the department, the Secretary of the Interior, from the parts of the contracting officer's decision which were adverse. The Secretary of the Interior affirmed the contracting officer's decision in all respects.

The plaintiff, in its petition in this suit, used the same numbers for its claims which it had used in the proceedings in the department. It did not, however, include some of the claims in this suit which it had urged upon the department. Some other claims which it included in its petition it has now abandoned, since receiving our Commissioner's report. The numbering of the claims in our findings and opinion is, therefore, not consecutive, there being some numbers missing in the sequence.

As to certain of the claims, the findings of the contracting officer were favorable to the plaintiff and the plaintiff is satisfied with the

amounts awarded. Those amounts have not been paid, and 209 the plaintiff is entitled to a judgment for those amounts.

Those claims are as follows: No. 5, \$2,450; No. 13, \$4,125; No. 18, \$466.40; and No. 41, \$500.

As to the contested claims, the Government urges that the departmental action was final and binding upon the plaintiff, under the terms of its contract. The pertinent provisions of the contract are Article 15 of the contract, relating to Disputes, and Paragraph 14 of the specifications, relating to Protests. We quote these provisions in a footnote. As to most of the claims, we have found that the plaintiff's protests were oral. The Government seems to urge that since they were not written, they were ineffective. But Paragraph 14 does not say that a contractor's protests and requests for written instructions must be in writing, and we do not construe it to so, require. The contracting officer did not, as Paragraph 14 provides, respond to the plaintiff's protests and requests for written instructions by furnishing such instructions. He refused to furnish them, saying that the contract required what he was demanding of the plaintiff. The plaintiff performed the work demanded, and did not,

The cited paragraph of the specifications is as follows:

Article 15. Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning question of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

<sup>14.</sup> Protests.—If the contractor considers any, work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the contracting officer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or decision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within 10 days. after date of receipt of the written instructions or decision, he shall file a written protest with the contracting officer, stating clearly and in detail the basis of his objections. Except for such protests or objections as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions, or decisions of the contracting officer shall be final and conclusive. Instructions and/or decisions of the contracting officer contained in letters transmitting drawings to the contractors shall be considered as written instructions or decisions subject to protest or objections as herein provided.

within 10 days, file written protests with the contracting officer. We think that it was not required to do so and lost no rights by not doing so. The Government was in default so far as the specified procedural steps were concerned, and has no right to complain of the plaintiff's default.

Paragraph 14 of the specifications provides no finality of departmental decision in circumstances such as we have here. Indeed, finality is almost expressly excluded by the provision that the contracting officer's decision shall be final except where protests are made and followed up in the specified manner. Since the plaintiff did protest, and the Government failed to respond with written instructions, the plaintiff is entitled to whatever rights it would have had if its protests had been followed by the rest of the specified procedure. Its rights, then, were not determined by any departmental decision agreed to by its accepting paragraph 14 of the specifications.

As we have said, the plaintiff did file its claims with the contracting officer and appealed that officer's adverse decisions to the head of the department, who affirmed the decisions. Those steps were the steps described in Article 15 of the contract, which we have quoted. Were they taken because Article 15 of the contract, was applicable, or were they taken only as a hopeful ayenue to possible relief? In the case of United States v. Moorman, 338 U. S. 457, the Supreme Court held that paragraph 2-16 of the specifications, there involved stood on its own feet, and that this court's decision making it subject to Article 15 of the contract, 113 C. Cls. 115 at 179 was erroneous. Paragraph 2-16 in the Moorman case covered the same factual situations as paragraph 14 in the instant case. It said:

If the contractor considers any work demanded of him to be outside the requirements of the contract, or if he considers any action or ruling of the contracting officer or of the inspectors to be unfair, the contractor shall etc.

But it went on to provide for a decision by the contracting officer and an appeal, if desired, to the head of the department, whose decision should be final.

The Supreme Court said in the Moorman case that the parties had a reason for inserting paragraph 2-16 in the specifications, the reason being their desire to escape from the "oft repeated conclusion" of this court that questions of "interpretation" of contracts are not questions of fact. Paragraph 2-16 on its face made all questions, covered by it subject to final departmental

211 decision, whether they were questions of fact or law. The provision in Article 15 of the contract for final departmental decisions only on questions of fact was held to place no restriction upon the breadth of paragraph 2-16 of the specifications.

If, in the instant case, the provisions of paragraph 14 of the specifications stand on their own feet, and remove the factual situations covered by the paragraph from the coverage of Article 15 of the contract, then there is, in the factual situation which we have before us, no provision for any appeal to the head of the department, and no provision for finality of the decision of anyone. Indeed there is no provision that the contracting officer shall make any decision, after he has received the written protest of the contractor, "stating clearly and in detail the basis of his objections". If that is all there is to the contract, of course the plaintiff has a right to assert in court that the contract was breached by the government since the contract gives him no other relief and provides for no departmental decision, final or otherwise.

We would suppose that paragraph 14 was a piece of careless writing by some representative of the Government and that the writer probably had a vague intention that the gaps left in his writing should be filled in by the general provisions of Article 15. might, in violation of at least two canons of interpretation, (1) that an ambiguity in a contract should be resolved against the. party who wrote the contract and (2) that the intention of parties to submit their contractual disputes to final determination outside the courts should be made manifest by plain language. Mercantile. Trust Co. v. Hensey, 205 U. S. 298, 309, cited with approval in the Moorman case, supra, relieve the Government of the burden of its careless drafting, but in view of the decision in the Moorman case, supra, we leave the question undecided. For reasons which we will now state, we have concluded that, even if we apply the Brovisions of Article 15 to the claims before us, the plaintiff isstill entitled to be heard upon them.

Article 15, which we have quoted, supra, provides for finality of departmental decision only with regard to "all disputes concerning questions of fact arising under this contract."

In the Moorman case, supra, the Government apparently, urged that the question there presented of interpretation of the language of the contract was a question of fact and that, therefore, even if Article 15 was applicable, the departmental decision was final. The court said:

But while there is much to be said for the argument that the "interpretation" here presents a question of fact, we need not consider that argument. For a conclusion that the question here is one of law cannot remove the controversy from the ambit of par. 2-16 of the specifications.

In view of this observation of the Supreme Court, we have reexamined the doctrine heretofore applied by this court to this problem.

We are, of course, aware that questions of the interpretation of written documents are not, speaking with analytical accuracy, in most cases questions of law in the sense that a lawyer or a judge has the special skill needed to answer them. They may be questions of agriculture, or engineering, or finance, or medicine, or law. o. the division of judicial functions between the judge and the day jury which only by accident would have the requisite skill in a particular case, the judge reserved this function to himself, presumably as being more competent than the jury. And judges and lawyers began to call the questions "questions of law," as a short way of saying that they should be decided by the judge. This method of expression, though analytically inaccurate was, so far as we know, quite universal. All the courts, including the Supreme Court of the United States, used it, and applied it with serious ronsequences. Hamilton v. Liverpool, London, and Globe Insurance Co., 136 U. S. 242, 255, Bliven, et al. v. New England Screw Co., 23 How. 420, 433; Tyrner, et al. v. Yates, 16 How, 14, 23. Where appellate courts have had jurisdiction to review questions of law but not questions of fact, they have held that they could review questions as to the interpretation of contracts. See United States v. E. J. Biggs Construction Co., 116 Fed. 2d 768, 770. Similar .. statements and decisions were early made by this court with 213 - reference to the finality of the decisions of a designated officer

in problems afising in government contracts. Lyons v. United States, 30 C. Cls. 352, 365; Collins and Farwell v. United States, 34 C. Cls. 294, 332. Other Federal Courts held likewise. Lewis, et al. v. Chicago, S. F. & C. Ry. Co., 49 F. 708, 710, 713; King Iron Bridge & Manufacturing Co. v. City of St. Louis, 43 F. 768. The Government has sited us as sutherity to the gentrory.

ment has cited us no authority to the contrary. In view of the unanimity of statement by courts that questions of the interpretation of written documents were "questions of law" the plaintiff urges that the representatives of the Government, and of contractors, who adopted Standard Form 23 which included Article 15, chose the language there used in the light of the then universal usage of the courts, and hence did not mean to include questions of the interpretation of written contracts within the "questions of fact" which were made subject to final departmentaldecision. This court and other courts dealing with the question have interpreted Article 15 as the plaintiff would have it interpreted. Albina Marine Iron Works, Inc. v. United States, 79 C. Cls. 714. 722; Davis, et al. Trustees v. United States, 82 C. Cls. 334, 346-347; Rust Engineering Co. v. United States, 86 C. Cls. 461, 477; Schmoll, Assignee v. United States, 91 C. Cls. 1, 33; Callahan Construction Co. v. United States, 91 C. Cls. 538, 616-617; Ruff v. United States, 96 C. Cls. 148, 165; B-W Construction-Company v. United States, 97 C. Cls. 92, 118-119; John McShain, Inc. v. United States, 97 6. Cls. 281, 295; Gerhardt F. Meyne Co. v. United States, 110 C.

Cls. 527, 548. Other Federal Courts have given the same interpretation to this standard Government contract provision. General Steel Products Corporation v. United States, 36 F. Supp. 498, 502; Lundstrom v. United States, 53 F. 2d 709, 711. See also Central Nebraska Public Power and Irrigation District v. Tobin Quarries, 157 F. 2d 482, 486.

Of greater significance, perhaps, is the fact that the Government itself, through its Boards of Contract Appeals set up in the departments to act as the authorized representative of the heads of departments to hear and decide appeals by contractors from the de-

cisions of contracting officers, has also interpreted Article 15
214 of the standard contract as not including, in its expression
"disputes concerning questions of fact", disagreements as to
the interpretation of written contracts. Thus these Boards have,
at the urging of the Government, dismissed appeals because they
involved such questions. Appeal of W. F. Trimble & Son Co., 1
CCF. 47, 48; Appeal of Fred A. M. de Groot, Inc., 1 CCF. 148,
149; Appeal of Central Engineering & Contracting Corporation, 3
CCF 989, 992; Appeal of Ross Engineering Company, 3 CCF.

In the current "Charter for the Armed Services Board of Contract Appeals", effective May 1, 1943, modified June 30, 1949, in paragraph 4 appears this language:

1153, 1155.

When an appeal is taken pursuant to a disputes clause in a contract which limits appeals to disputes concerning questions of fact, the board may nevertheless in its discretion hear, consider, and decide all questions of law necessary for the complete adjudication of the issue.

If the Board "in its discretion" chose not to consider and decide the pertinent questions of law it would not, presumably, decide the case, hence resort to a court would seem to be open to the con-The draftsmen of the charter were apparently using the expression "questions of law" with the analytically inaccurate but judicially common meaning described above. The Board, acting under the charter, treats questions of the interpretation of contracts as "questions of law" and decides them, or refuses to decide them, in its discretion. See Appeal of B. G. Cury Co., ASBCA No. 227, Oct. 27, 1949; Id. ASBCA No. 228, Oct. 27, 1949; Id. ASBCA No. 286, Nov. 21, 1949: Erman Howell Division, Luria Steel and Trading Corporation, ASBCA No. 188, Nov. 29, 1949; Franklin Iron and Metal Co., ASBCA-No. 194, Nov. 30, 1949. We think it would be intolerable that this court should refuse to consider claims involving interpretation of contracts, when the departmental board is directed to hear them only "in its discretion." Is the contractor supposed to have agreed that he may have a departmental ruling

only if the departmental board chooses to give him one; that he may find out whether they will give him one only by going to the trouble and expense of preparing the case for the board, but that if they do choose to give him a ruling, it will be final?

When the Boards have decided questions of interpretation on appeal, they have made it plain that they were doing so, not because the "disputes concerning questions of fact" clause of the contract authorized them to do it, but because the plaintiff had asked for the decision and the head of the department had authorized the board to make it. See Appeal of Robert E. McKee, BCA No. 1617, Jan. 21, 1948; Appeal of S. K. Jones Construction. Co., BCA No. 1619, Feb. 6, 1948. See our decision of today in McWilliams Dredging Co. v. United States, No. 48894, for an explanation of why such a decision of the Board does not foreclose the contractor from litigating the question in a court.

We now consider the plaintiff's claims upon their merits. The findings are long and detailed and the details will not be repeated in this opinion.

# Claim No. 1

Findings 23 to 32 relate to this claim. We have concluded that no substantial extra costs were incurred by the plaintiff because of its excavation in Area A, rather than in higher ground, except for the first two days of excavation in that area. The plaintiff has not proved what its extra costs were for those two days, and therefore cannot recover on this claim.

# Claim No. 2

Findings 33 to 44 relate to this claim. The plaintiff cannot recover upon this claim. We have found that the material here in question was stockpiled for the plaintiff's convenience for future use, and was so used when the embankment had been built up to a height convenient for its use.

# Claim No. 3

Findings 45 to 50 relate to this claim. Under the terms of the Extra Work Order No. 6, the plaintiff was entitled to be paid the scheduled price of 35 cents per cubic yard for rehandling 1,966 cubic yards of material, a total amount of \$688.10, which plaintiff is entitled to recover.

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# Claim No. 4

Findings 51 to 63 relate to this claim. We have concluded that, as to the excavation below elevation 7,528, the contract did not require the plaintiff to perform this unexpectedly difficult and ex-

pensive work for the price named in the schedule. It is entitled to recover its extra costs, amounting to \$497.97.

## Claims Nos. 6 and 10

Findings 65 to 80 relate to these claims. The Government required the plaintiff to insert tile drains embedded in gravel to keep the trenches dry while they were being filled with impervious material. The plaintiff contends that the much cheaper method of open ditches would have served that purpose. We are not persuaded that open ditches would have been effective. The plaintiff cannot recover on these claims.

## Claims Nos. 7 and 8

Findings 80 to 87 relate to these claims. The tile drains here in question were not provided for in the contract. As they were constructed, they served the plaintiff's convenience in drying out the area for the placement of concrete and for other work, but, as constructed, they also permanently benefitted the Government by being left in place as an additional safeguard against upward pressure of ground water against the concrete floor of the outlet channel. The plaintiff may recover \$200 upon this claim.

## Claim No. 11

Findings 88 to 92 relate to this claim. The work here involved was necessary for the unwatering of the foundation, and the plaintiff was obligated by the contract to do it. It cannot recover for its cost.

#### Claim No. 17

Findings 97 to 124 relate to this claim. Paragraph 10 of the specifications quoted in Finding 14 provides that when the contractor is ordered to perform extra work not covered by the specifications or included in the schedule, and when no price for

for at actual necessary cost as determined by the contracting officer, plus 10 percent for superintendence, general expense and profit. The dispute in this case is as to the amount of the actual cost of the work. The contracting officer agreed with the plaintiff as to the hours of labor and rates of pay of the workmen engaged, as to the hours of use of equipment, except in specific instances, and as to the cost of materials used. The disagreement was and is with regard to the allowance to be made for the use of the plaintiff's equipment in performing the extra work. The contracting officer computed the allowance for the use of the equipment and its operating expense at \$145,230.07, and awarded the plaintiff \$44,208.45 in addition to the amounts which had been currently

paid. The award was rejected and has not been paid to the plaintiff, and in its petition it claims \$181,721.10 on this item.

We have found that, using proper accounting methods to determine a proper allowance for the use of the plaintiff's equipment, its extra costs, in addition to the amount currently paid, were \$155,-748.44. One error in the contracting officer's method of accounting was that he took the schedule of rental charges for the use of a contractor's own equipment, which schedule was promulgated by the Bureau of Reclamation, in effect divided the annual rental specified in the schedule by the number of hours which the machine could work if it worked every day in the month and every hour of the working day, during the number of months specified in the schedule as being proper working months for the machine in question in the area in question, and used that quotient as the rate per hour for the use of the plaintiff's machines. It then applied the hourly rate so derived to the actual number of hours which the plaintiff's machines worked on the job covered by this claim. The hourly rate thus derived was completely unrealistic and unfair. Annual rental rates, such as those promulgated by the Bureau of Reclamation, are not based upon the false assumption that such machines work every hour of every day, with no interruptions on account of weather,

necessary minor repairs or for other reasons. These losses of time are not supposed to be at the expense of the owner, when in fact the machine is, at the time, being devoted to the job of the hirer.

An error more costly to the contractor was the contracting officer's computation of the costs of current repairs and maintenance of the machines. The contracting officer was aware of the plaintiff's actual costs, incurred during the period, and could have readily computed a proper hourly rate for each machine. But he disregarded the actual costs, presuming that they were excessive and must have included major repairs and general overhauling. There was no substantial evidence to support that view, since the records showed that none of the machines was out of service long enough for such treatment. The contracting officer assigned 'arbitrary hourly figures for the costs of repairs and maintenance of the machines, and it is hard to tell how he hit upon such figures. For example, he awarded substantially the same hourly rate for a \$205 jack hammer that he did for a \$20,000 Euclid tractor truck, and, only a few cents more for a \$39,000 dragline.

We conclude that the plaintiff did not agree, by signing this contract, to be bound by administrative decisions made in disregard of the practices of trade, of proper accounting methods, and of the known facts as to actual costs. Nor did it agree to be bound by computations based on arbitrarily chosen figures which on their face show that they must be wrong. We conclude that the administrative treatment of this important claim of the plaintiff was

arbitrary and capricious. The plaintiff may recover \$155,748.44 on this claim.

#### Claim No. 20

Findings 127 to 143 relate to this claim. The contracting officer decided that the excavation here in question was "stripping," while the plaintiff claims that it was trench excavation. We have concluded that it did not come within either of these classifications in the specifications, as properly interpreted. It was more nearly comparable to borrow excavation than to either of the other classifications and the plaintiff is entitled to \$6,125.49, which includes the \$1,279.95 awarded by the contracting officer but rejected by the plaintiff.

# 219

## Claim No. 27

Findings.144 to 146 relate to this claim. The plaintiff cannot recover. It was paid all that it was entitled to under its contract.

## Claim No. 31

Findings 147 to 158 relate to this claim. The contracting officer's decision that the neat lines, and not the lines to which the plaintiff actually excavated, should be used in measurement for payment was in the circumstances reasonable, and the plaintiff cannot recover on this claim.

#### Claim No. 33

Findings 159 to 166 relate to this claim. The Government had the right to change the design of the work, as it did here, and the plaintiff was obligated to do the redesigned work at contract rates. It cannot recover on this claim.

# Claim No. 34

Findings 167 to 172 relate to this claim. We conclude, rather doubtfully, that the temporary filling of the excavation by the plaintiff, rather than leaving it open to await the change of design which the Government had the right to make, was not a necessary consequence of the change of design, but was an act done by the plaintiff of its own choice. The plaintiff cannot recover upon this claim.

#### Claim No. 35

Findings 173 to 179 relate to this claim. The contract provided for additional payment for extra rolling of the material in the embankment, except under certain circumstances. The plaintiff was ordered to do the extra rolling, and expected to be paid for it. When its payment arrived, nothing was included for the extra rolling. The plaintiff requested payment, but payment was refused on

the ground that it was not possible, after the rolling had been completed, to verify the yardage involved. The yardage of extra rolling is sufficiently verified anothe plaintiff is entitled to \$1,500.83 on this claim.

220

## Claim No. 37

Findings 180 to 186 relate to this claim. We have found that the excavation covered by it has already been paid for. The claim must, therefore, be denied.

Upon the contested claims the plaintiff is entitled to recover \$164,760.83, and upon the uncontested ones referred to earlier in this opinion \$7,541.40, making a total of \$172,302.23.

It is so ordered.

LITTLETON, Judge.

Howell, Judge; Whitaker, Judge; and Jones, Chief Judge, concur.

# 221-222 JUDGMENT OF THE COURT-June 5, 1950

Upon the special findings of fact, which are made a part of the judgment herein, the court concludes as a matter of law that the plaintiff is entitled to recover.

It is therefore adjudged and ordered that plaintiff recover of and from the United States the sum of one hundred seventy-two thousand three hundred two dollars and twenty-three cents (\$172,-302.23).

# 223-224 PROCEEDINGS AFTER ENTRY OF JUDGMENT

On June 8, 1950, plaintiffs filed a motion to amend special findings of fact.

On June 27, 1950, the court filed the following order on said motion:

## Order

This case comes before the Court on plaintiffs' motion to amend the special findings of fact filed herein June 5, 1950, and, on consideration thereof,

It is ordered this twenty-seventh day of June, 1950, that said motion be and the same is allowed, and said findings are amended in the following particulars:

Finding 116, at the end of the tenth line on page 72, ending with the word "expense" add the following:

The method of computation of hourly rental rates for equipment used by the contracting officer and the head of the department was

arbitrary and capricious, and the result arrived at by that method was grossly erroneous.

225-226 Page 74, after the figures "\$317,475.72" at the beginning of the eighth line of the second full paragraph strike out the word "By" and amend the balance of the sentence so that it will read as follows:

Dividing the annual rates so determined by the maximum number of hours this equipment could have been used or its actual use, whichever was greater, gives the rate per hour applicable to actual performance.

Amend finding 117, page 75, by adding at the end of the second full paragraph the following:

The method of computation of plaintiffs' costs for the repair and maintenance of its equipment, used by the contracting officer and the head of the department, was arbitrary and capricious, and the result arrived at by that method was grossly erroneous.

The findings filed as of June 5, 1950 as thus amended are to stand.

BY THE COURT

/s/ Marvin Jones, Chief Judge.

227-228 On August 14, 1950, on motion made therefor and allowed by the court, defendant filed a motion for a new trial,

On October 2, 1950, the court entered the following order on said motion:

#### Order

It is ordered this 2nd day of October, 1950, that the defendant's motion for new trial be and the same is hereby overruled.

On February 12, 1951, the parties filed a stipulation designating parts of the record material to the errors assigned in defendant's request for record in re certiorari as follows:

Stipulation of the Parties Designating Parts of the Record Material to the Errors Assigned

The defendant in the above-entitled case has notified the plaintiffs of its intention to file without unnecessary delay a petition for a writ of certiorari and has presented counsel for plain-229-230 tiffs with its motion for leave to proceed under proposed

Rule 57(d), to which this stipulation is attached, together

with its assignment of errors similarly attached. Now, in order. to simplify and expedite these proceedings, the parties do hereby stipulate and agree through their respective attorneys that the pleadings, findings of fact, conclusions of law, judgment and opinion of this Court are material to the errors assigned and that the following additional portions of the record include all the parts thereof which either party-deems to be material to the errors assigned:

1. The portions of the transcript bearing on Claim No. 17, namely, pp. 1-3, 9-22, 27, 62-63, 88, 99-100, 109, 251-276, 416-417, 446, 521-535, 576, 639-641, 671-676, 710-715, 763-773, 809-823, 836-837, 861-924, 925-928, 960-977, 1017-1018, 1049-1052, 1061, 1073-1083, 1090-1093, 1116-1118, 1169-1171, 1242-1068-1069. 1243, 1486, 1510-1519, 1521-1522, 1541-1752, 1754-1455,

1776-1787, 1792-1794, 2197-2207, 2212-2231, 2245-2249, 231-232 2361-2442, all inclusive. (While only the foregoing portions of the transcript are deemed material by either of the parties, it is respectfully suggested that it might prove less difficult as a matter of mechanics to transmit the entire transcript to the Suprem Court than to excerpt the pages indicated. If the entire transcript were forwarded, the parties should nevertheless be limited to the designated pages which alone would constitute part of the record properly before the Supreme Court.)

- 2. Plaintiffs' Exhibit A.
- 3. Plaintiffs' Exhibit B-2.
- 4. Plaintiffs' Exhibit B-5.
- 5. Plaintiffs' Exhibit C.
- 6. Plaintiffs' Exhibit D.
- 7. Plaintiffs' Exhibit E.
- 8. Plaintiffs' Exhibit G.
- 9. Plaintiffs' Exhibit H.
- 10. Plaintiffs' Exhibit 17.
- 11. Plaintiffs' Exhibit 17-A9
- 12. Plaintiffs' Exhibit 17-B.
- 13. Plaintiffs' Exhibit 17-C.
- 14. Plaintiffs' Exhibit 17-D.
- 15. Plaintiffs' Exhibit 17-E.
- 16. Plaintiffs' Exhibit 17-F.
- 17. Defendant's Exhibit C.
- 18. Defendant's Exhibit F.
- 19. Defendant's Exhibit G.
- 20. Defendant's Exhibit K.
- 21. Defendant's Exhibit N.
  - 22. Defendant's Exhibit P.
- 23. Defendant's Exhibit Q.
- 24. Defendant's Exhibit R.

25. Defendant's Exhibit S.

26. Defendant's Exhibit T. 27. Defendant's Exhibit 17-1. 28. Defendant's Exhibit 17-A 29. Defendant's Exhibit 17-B. 30. Defendant's Exhibit 17-C. 31. Defendant's Exhibit 17-D. 32. Defendant's Exhibit 17-E. 233 33. Defendant's Exhibit 17-F. 34. Defendant's Exhibit 17-G. 35. Defendant's Exhibit 17-H. 36. Defendant's Exhibit 17-I. 37. Defendant's Exhibit 17-J. 38. Defendant's Exhibit 17-K. 39. Defendant's Exhibit 17-L. 40 Defendant's Exhibit 17-M. 41. Defendant's Exhibit 17-N. 42. Defendant's Exhibit 17-O. 43. Defendant's Exhibit 17-P. 44. Defendant's Exhibit 17-Q. 45. Defendant's Exhibit 17-R. 46. Defendant's Exhibit 17-S. 47. Defendant's Exhibit 17-T. 48. Defendant's Exhibit 17-U. 49. Defendant's Exhibit 17-V. 50. Defendant's Exhibit 17-W. 51. Defendant's Exhibit 17-X. 52. Defendant's Exhibit 17-Y. 53. Defendant's Exhibit 17-Z. 54. Defendant's Exhibit 17-AA. 55. Defendant's Exhibit 17-BB.

Respectfully submitted;

56. Defendant's Exhibit 21-A.

(S.) NEWELL A. CLAPP,

Acting Assistant Attorney General.

(S.) King and King,

Attorneys for Plaintiffs.

Note: The Entire Transcript of Testimony Together with the Exhibits as Listed Above Accompany this Record under Separate Cover.

234-235 Clerk's Certificate to foregoing transcript omitted in printing.

236

Supreme Court of the United States

ORDER EXTENDING TIME TO FILE PETITION FOR WRIT OF CERTIORARI

Upon consideration of the application of counsel for petitioner, It is ordered that the time for filing petition for writ of certiorari in the above-entitled cause be, and the same is hereby, extended to and including March 1, 1951.

> FRED M. VINSON, Chief Justice of the United States

Dated this 26th day of December, 1950.

237

In the Supreme Court of the United States

October Term, 1950

# STIPULATION AS TO PARTS OF RECORD TO BE PRINTED

In a stipulation approved by the Court of Claims, the parties have designated for certification to this Court a number 61 portions of the record material to the errors assigned by the United States in its petition for a writ of certiorari in addition to the pleadings, findings of fact, conclusions of law, judgment and opinion of the Court of Claims

Now, subject to the approval of this court, the parties do hereby stipulate and agree that, for purposes of the petition for certiorari, the portions of the record to be printed should be as follows:

- 1. Pleadings.
- 2. Findings of Fact.
- 3. Conclusions of Law.
- 4. Judgment. ·
- 5. Opinion.
- 6. Order of June 27, 1950 amending findings of fact.
- 7. Motion for new trial.
- 8. Order denying motion for new trial.
- 9. This stipulation.

238 It is further agreed that either party may make reference to the unprinted materials in the record and that this stipulation is without prejudice to the right of either party to designate additional portions of the record to be printed in the event certiorari is granted.

PHILIP B. PERLMAN.

Solicitor General.

HERMAN J. GALLOWAY, Attorney for Respondents.

February 23, 1951

Supreme Court of the United States

Octobel Term, 1950 No. 584

THE UNITED STATES, PETITIONER

MARTIN WUNDERLICH ET AL

Order allowing certiorari

Filed May 7, 1951

The petition herein for a writ of certiorari to the United States Court of Claims is granted. The case is transferred to the summary docket.

And it is further ordered that the duly certified copy of the transcript of the proceedings below which accompanied the petition shall be treated as though filed in response to such writ.

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# In the Sayreme Court of the United States

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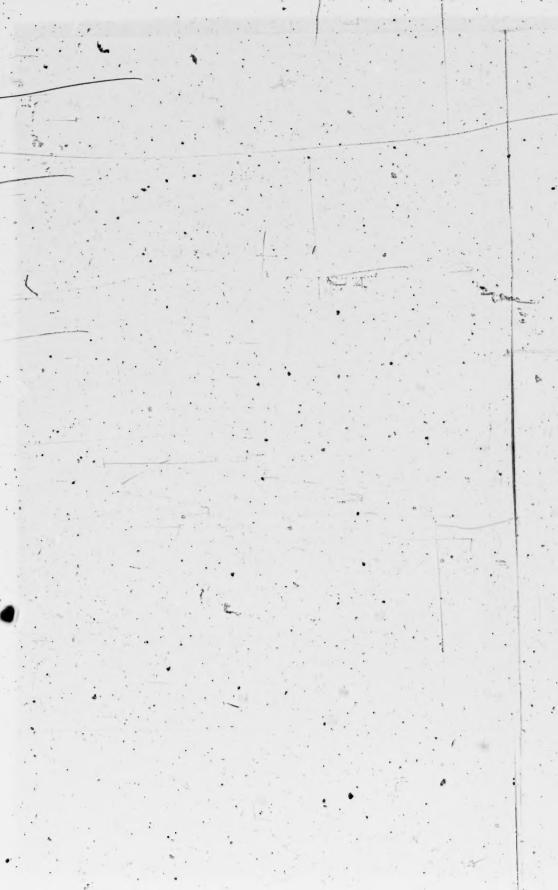
THE UNITED STATES, PETITIONER

MARIE WUNDERICH, AND M. WUNDERLICH, MARIE WUNDERLICH, E. MURIELLE WUNDERLICH AND THEODORE WUNDERLICH, A PARTNERSHIL, TRADING UNDER THE NAME OF MARTIN WUNDERLICH COMPANY

PETITION FOR A WRIT OF CERTIORARI TO THE



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## Inthe Supreme Court of the United States

OCTOBER TERM, 1950

No. 584

THE UNITED STATES, PETITIONER

22.

MARTIN WUNDERLICH, ANN M. WUNDERLICH,
MARIE WUNDERLICH, E. MURIELLE WUNDERLICH
AND THEODORE WUNDERLICH, A PARTNERSHIP,
TRADING UNDER THE NAME OF MARTIN WUNDERLICH COMPANY

# PETITION FOR A WRIT OF CERTIORARI TO THE COURT OF CLAIMS

The Solicitor General, on behalf of the United States, prays that a writ of certiorari issue to review the judgment of the Court of Claims entered in the above-entitled case on June 5, 1950.

OPINION BELOW

The opinion of the Court of Claims (R. 159-170) is reported at 117 C. Cls. 92.

JURISDICTION

The judgment of the Court of Claims was entered on June 5, 1950 (R. 170). A motion for a

new-trial, filed on August 14, 1950 was denied on October 2, 1950 (R: 171). By an order of the Chief Justice, dated December 26, 1950, the time for filing a petition for a writ of certion ri was extended to and including March 1, 1951 (R. ). The jurisdiction of this Court is invoked under 28 U.S.C. 1255.

#### QUESTIONS PRESENTED

Article 15 of the standard form government construction contract provides that a department head's decision on "all disputes concerning questions of fact arising under this contract shall be final and conclusive upon the parties thereto." In this case the Court of Claims has held that the determination of an "equitable adjustment" for work performed pursuant to a change order under the contract is acquestion of law not embraced within Article 15, and it has set aside such a determination even though (a) the contractor did not allege, and the court did not find, fraud or such gross error as necessarily implies bad faith; (b) there was no evidence of bias, prejudice, haste, arbitrariness or caprice in the department head's decision; and (c) it was supported by ample evidence and by administrative experience with comparable contractual problems.

The questions presented are:

1. Whether the holding that the determination of an "equitable adjustment" is a question of law

conflicts with United States v. Callahan Walker Co., 317 U.S. 56.

2. Whether the failure of the Court of Claims to accord finality to department heads' decisions in cases of this character is in conflict with the governing principles of judicial review recently reiterated in *United States* v. *Moorman*, 338 U.S. 457.

#### CONTRACT PROVISIONS INVOLVED

Pertinent portions of the contract and specifications are set forth in the Appendix, infra, pp. 25-27.

#### STATEMENT

This litigation grows out of the performance of a contract for the building of a dam by respondent for the Government. The contract work, for which notice to proceed was given on April 18, 1938, was satisfactorily completed in October, 1941, and respondent has been paid a total of \$2,-220,965.30 therefor (R. 67). In accepting final payment, respondent reserved 43 claims for additional sums (R. 76). Some of these were subsequently abandoned, some were resolved in respondent's favor by the contracting officer whose decision on all of the claims was affirmed by the Secretary of the Interior acting through his First Assistant (R. 76-77).

In this suit respondent re-asserted 21 of the

The several respondents, who trade as the "Martin Wunderlich Company," are collectively referred to herein as "respondent."

claims which had been administratively decided. Four of these (on which respondent was satisfied with the administrative ruling but payment had not yet been made) were not contested by the Government, six were allowed by the Court of Claims, and eleven were either abandoned or denied (R. 77, 160, 166-170). Total recovery on the six contested claims granted by the court was \$164,760.83, of which \$155,748.44 was allowed on the single claim referred to in this litigation as Glaim No. 17 (R. 170, 169). It is to the decision on this single claim that this petition is directed.

Claim No. 17 arose because, in an equitable adjustment in the contract price made by the contracting officer and approved by the department head for work performed pursuant to a change order, respondent was awarded a sum smaller than it claimed. The dispute centers on the amount respondent was awarded for the use and maintenance of its equipment in excavating, separating, and hauling earth and cobbles under the change order. While the facts bearing immediately upon the disputed determination are thus relatively limited, they are best understood against a background of developments in the contract work which led to the controversy.

a. Events leading to the order for changes and equitable adjustment.—The dam embankment, the main feature of the contract work, was to consist of earth fill of varying degrees of coarseness,

cobbles, and other materials (R. 67-68).<sup>2</sup> To the extent that the materials required for the embankment proved to be unavailable from excavations for required structures, they were to be obtained "from borrow pits as directed by the contracting officer" (R. 54).

Under Item 14 of the contract unit price schedule, the contractor was to be paid at the rate of 23 cents per cubic yard for common excavation in earth borrow pits and transportation to the embankment of materials so excavated (R. 31). Item 16 of the schedule provided for payment at 35 cents per cubic yard for excavation from cobble borrow pits, separation, and transportation to the embankment of cobble-fill materials (R. 31).

The contract drawings showed two earth borrow pit areas, the work in one of which, borrow pit No. 2, gives rise to the claim involved here. In 1938, after respondent had excavated some earth fill from the top stratum of borrow pit No. 2, the underlying materials were found to contain a large quantity of cobbles exceeding five inches in diameter. About November 1, 1939, respondent was ordered to obtain from this pit additional

The drawings also showed a cobble borrow pit but, for reasons which appear below (p. 6), this was never used as a

source of material for cobble fill (R. 113).

<sup>&</sup>lt;sup>2</sup> The cobble-fill portions of the embankment were to consist of cobbles over 2½ inches in diameter (R. 61). The earth-fill portions were to consist of a mixture of clay, sand, and gravel and were to contain no stones having maximum dimensions greater than five inches. Stones over five inches in size were to be removed by the respondent from otherwise approved earth-fill materials (R. 58, 59).

coarse materials which were then needed for the earth-fill portion of the embankment (R. 114). Respondent objected to performing this work as common excavation at 23 cents per cubic yard under pay item 14, contending that the large amount of oversized cobbles requiring separation warranted payment at 35 cents under item 16 (R. 115). On December 11, 1939, it signed under protest a pay voucher including 79,847 cubic yards excavated from borrow pit No. 2, during 1939, for payment under item 14 (R. 115).

Following extended but fruitless negotiations, in the course of which respondent rejected an offer by the contracting officer to reclassify a portion of borrow pit No. 2 as a cobble borrow pit (R. 115-120), a mandatory order for changes, Order No. 3, dated August 31, 1940, was issued pursuant to Article 3 of the contract (Appendix, infra, p. 25). This order directed respondent, in lieu of obtaining cobbles from the cobble borrow pit area (see note

, supra), to use the cobbles separated from materials excavated in the earth borrow pit areas and to submit within a specified period any claim for an adjustment in the contract price based upon the change (R. 120-121).

b. Respondent's claim and the disputed administrative decision.—On December 28, 1940, respondent filed a claim for \$334,994.42 for the work in borrow pit No. 2 (R. 121). In this claim, which was subsequently increased twice (R. 121,

cents per cubic yard, under item 16 of the contract schedule, for the 79,847 cubic yards of materials excavated from borrow pit No. 2 during 1939 (supra, p. 6). For the excavation in borrow pit No. 2 during 1940, respondent claimed its cost of performance plus 10% for superintendence, general expense and profit, following the formula provided by paragraph 10 of the contract specifications (Appendix, infra, p. 26) for "extra work \* \* \* not covered by the specifications or included in the schedule \* \* \*" (R. 10).

On June 16, 1941, the contracting officer replied to the claim, pointing out that there was no order directing payment for operations in borrow pit No. 2 during 1940 on the basis of cost plus 10% but finding that an adjustment on this basis would be equitable in the circumstances (R. 122). With exceptions now immaterial, the contracting officer found that respondent's figures for hours of labor and rates of pay, for hours of use of equipment, and for cost of materials were correct (R. 121). He went on to find, however; that the rates submitted for use and maintenance of equipment were excessive, and allowed for this item an amount considerably smaller than respondent claimed (R. 122). This latter determination, the main subject of the claim here, involves two disputed factors: (1) a rental allowance for respondent's equipment used during 1940 in borrow

pit No. 2, and (2) an allowance for field repairs and maintenance of this equipment.

Both respondent and the contracting officer used an ownership rental schedule published by the Bureau of Reclamation in deriving the divergent rental rates each asserted to be proper (R. 125). This schedule, based upon a similar schedule published by the Associated General Contractors of America (Pltf. Ex. 17-B), list# annual rental rates for various items of construction equipment (R. 125). Dividing the annual rental rate for each item of equipment by the number of hours in an eight-month working season, at two eight-hour shifts for 30 days each month, the contracting officer arrived at the hourly rate used in his determination. He then multiplied this rate by the number of hours respondent showed as hours of operation in borrow pit No. 2 during 1940 to arrive at the rental allowances for the equipment. He made no additional allowance for idle time (R. 127).

For the maintenance and repair rates which respondent had submitted and which he held to be excessive, the contracting officer substituted rates derived from Bureau of Reclamation experience on other projects, from work by government forces, and from experiences and practices of the Forestry Service, Bureau of Public Roads, Tennessee Valley Authority, and Colorado State Highway Department (R. 129; Deft. Ex. 17-V, p. 2).

Basing his award for use of respondent's equipment on rental and maintenance allowances computed in the manner just described, the contracting officer concluded that respondent was entitled to an equitable adjustment of \$40,400,15, in addition to the \$194,784.93 already paid, for the excavation in borrow pit No. 2 during 1940 (Pltf. Ex. C, p. 48). Applied to the yardage excavated in 1940, this represented a rate of \$0.0477 per cubic yard in additional compensation which the contracting officer then allowed for the 79,847 cubic yards excavated in borrow pit No. 2 during 1939 (Id. p. 50; R. 122). Adding the \$3,808.70 so determined, the contracting officer awarded respondent a total of \$44,208.85 in his decision of December 29, 1942 (R. 122, 125). On respondent's appeal to the Secretary of Interior, this decision was affirmed (R. 125).

c. The decision of the Court of Claims.—Refusing to accept the award determined by the Secretary of Interior as equitable, respondent sought recovery in the present suit of \$181,721.10 in additional compensation for the work performed during 1939 and 1940 in borrow pit No. 2 (R. 9-10).

Addressing itself generally to the contested claims before it (which include, of course, the claim under consideration here), the Court of Claims concluded that these claims involved interpretation of the contract and were, therefore, questions of law rather than of fact (R. 162-166). As

questions of law, the court declared, they were beyond the purview of Article 15 of the contract in which the parties had agreed to accept as final the department head's decision on "all disputes concerning questions of fact \* \* \*." Accordingly, the court proceeded to "consider the [respondent's] claims upon their merits" (R. 166).

As to Claim No. 17, the claim involved here, the court held that the administrative decision was erroneous in the amounts awarded both as rental allowances and as allowances for maintenance and The annual rental allowances in the Bureau of Reclamation Schedule, the court pointed out, were designed to include reimbursement for idle time (due to weather, repairs, etc.) as well as for hours of actual operation during the working season. By reducing these annual rates to hourly rates and applying these only to hours of actual operation on the work involved in this claim, the contracting officer had used, the court said, a "eompletely unrealistic and unfair" formula (R. 168). Applying a formula which made allowance for idle time, the court concluded that proper rental rates would total some \$30,000 more than the contracting officer had allowed (R. 129). In an order dated June 27, 1950, the court, on respondent's motion, amended its findings promulgated on June 5, 1950, to state that the contracting officer's method of computing rental rates was "arbitrary and capricious, and the result arrived

at by that method was grossly erroneous" (R. 170-171).

The allowances awarded by the Secretary of Interior for field repairs and maintenance were also held by the Court of Claims to be "arbitrary and capricious" (R. 168-169). The court held that respondent's figures on its actual costs had been improperly discarded and that arbitrary hourly figures had been substituted in their stead (R. 168). In its order of June 27, 1950, the court amended its findings to add the statement that the "method of computation of [respondent's] costs for the repair and maintenance of its equipment, used by the contracting officer and the head of the department, was arbitrary and capricious, and the result arrived at by that method was grossly erroneous" (R. 171).

Using amounts it determined to be correct for rental and maintenance allowances, the Court of Claims awarded respondent \$146,166.80, in lieu of the \$40,400.15 allowed by the department head, as additional compensation for the work in borrow pit No. 2 during 1940 (R. 132). While this award amounted to 17 cents per cubic yard; the court concluded that respondent was entitled to 12 cents per cubic yard for the 79,847 cubic yards excavated in 1939, or \$9,581.64 rather than the \$3,808.70 deemed equitable by the Secretary of Interior (R. 132). Instead of the administrative adjustment of \$44,208.85 which had been rejected, re-

spondent was thus allowed a total of \$155,748.44 by the judgment of the court below (R. 132, 169).

## SPECIFICATION OF ERRORS TO BE URGED

#### The Court of Claims erred:

- 1. In holding that the determination of an "equitable adjustment" for work performed pursuant to a change order under Article 3 of the contract was a question of law rather than a question of fact.
- 2. In failing to hold, in accordance with United States v. Callahan Walker Co., 317 U. S. 56, that the provision for final administrative settlement of disputes concerning questions of fact in Article 15 of the contract was applicable to the dispute involved in Claim No. 17 over an equitable adjustment for work performed pursuant to a change order under Article 3.
- 3. In setting aside the decision of the department head, without finding that the decision was fraudulent or so grossly erroneous as necessarily to imply bad faith, despite the contractor's agreement in Article 15 of the contract to accept decisions "concerning questions of fact" as "final and conclusive."
- 4. In setting aside the decision of the department head despite the fact that the plaintiff made no allegation of fraud or of such gross error as necessarily to imply bad faith.
- 5. In holding that the department head's rulings on Claim No. 17 were "arbitrary and capricious"

and "grossly erroneous" despite the facts that (a) there was no evidence of bias, prejudice, haste, or caprice in the administrative determination; (b) there was evidence to support the administrative determination; and (c) the standards guiding the administrative decision were relevant, intelligible, and reasonable.

6. In giving judgment for the plaintiff for \$155,748.44 in lieu of the administrative award of \$44,208.45.

#### REASONS FOR GRANTING THE WRIT

In so far as it rests upon the holding that the determination of an "equitable adjustment" constitutes a question of law and is therefore not entitled to the finality accorded by Article 15 to administrative resolution of "disputes concerning questions of fact," the decision of the Court of Claims is in square conflict with United States v. Callahan Walker Co., 317 U.S. 56. In so far as the court's characterization of the administrative determination as "arbitrary and capricious" and "grossly erroneous" means that such determination may be set aside even if it concerns questions of fact, the holding is, we submit, a plain misapplication of the settled rule that decisions under Article 15, "in the absence of fraud or of mistake so gross as to necessarily imply bad faith, will not be subjected to the revisory power of the courts." United States v. Gleason, 175 U. S. 588, 602: United States v. Moorman, 338 U. S. 457, 460462. Both of these errors reflect what we have heretofore described as a continued "tendency in the Court of Claims to whittle away the authority of designated officers of the United States to make final decisions under contracts." See *United States* v. *Moorman*, supra, at 460n.

In an effort to avoid expensive and time-consuming litigation of technical factual disputes, the Government bargains and pays for inclusion of Article 15 in its standard construction contracts. But Article 15, the binding scope of which has been made clear to the parties by numerous decisions of this Court, is largely nullified if courts (1) erroneously characterize facture questions as questions of law or (2) stigmatize honest and rational administrative determinations with which they disagree as "so grossly erroneous as to imply bad faith." We submit that the first of these errors, in plain disregard of this Court's decision in United States v. Callahan Walker Co., supra, is the primary basis of the decision below and that the second vitiates the alternative ground suggested in the court's amended findings and opinion.

The continuing importance of provisions in government contracts for final administrative resolution of disputes, reflected in this Court's numerous decisions correcting judgments of the court below

Among the numerous decisions to the same effect are Kihlberg v. United States, 97 U. S. 398; Martinsburg & Potomac R. R. Co. v. March, 114 U. S. 549; Plumley v. United States, 226 U. S. 545; Merrill-Ruckgaber Co. v. United States, 241 U. S. 387.

which have sought to na row the effectiveness of such provisions, is partitally great today, when the Government's contractual activities are a significant item in a huge national budget. The departure from settled principles, in the instant case, coupled with this Court's affirmance by an equal division (340 U. S. 898) of Penner Installation Corp. v. United States, 114 C. Cls. 571 and 116 C. Cls. 550, substitutes doubt for the certainty which alone can prevent the litigation the Government seeks to escape through Article 15. We urge, therefore, that this case presents an appropriate occasion for reaffirmation and particularization of the applicable rules.

1. In United States v. Callahan Walker Co., 317 U. S. 56, this Court held, reversing the Court of Claims, that a dispute over the amount of an equitable adjustment for construction of a false berm under an Article 3 change order posed "inquiries of fact" and that the provisions of Article 15 were applicable. In Callahan Walker the work performed pursuant to the change order involved the digging, moving, and placing of earth. In the present case the work consisted of excavating, separating, and hauling a mixture of earth materials and stones. Obviously, these differences in

<sup>5</sup> E.g., United States v. McShain, 308 U. S. 512, 520; United States v. Callahan Walker Co., supra; United States v. Blair, 321 U. S. 730; United States v. Beuttas, 324 U. S. 768; United States v. Holpuch Co., 328 U. S. 234; United States v. Moorman, supra.

job details provide no basis for distinguishing the cases.

Nor can the rule of Callahan Walker, wholly ignored in the opinion below, be escaped by the court's apparent belief that paragraph 10 of the contract specifications, rather than Article 3, is the contract provision governing the equitable adjustment involved here.6 It should be noted that the order for changes in this case was expressly and properly issued pursuant to Article 3 as a change' "in the drawings and/or specifications" of the contract-namely, a change in the designated source of cobbles for the embankment (R. 120). Paragraph 10 of the specifications, on the other hand, deals with "extra work \* .\* ered by the specifications or included in the schedule" (R. 34), and would seem to be irrelevant to the work involved here which was both "covered by the specifications" and "included in the Even accepting, however, the erschedule." 7

officer and the department head concluded that cost plus ten percent, the basis on which respondent submitted its claim and the basis on which paragraph 10 of the contract specifications happens to provide for extra compensation, would constitute an equitable basis for settlement of the claim for 1940 excavation (R. 122, 34-35). It may be that the court below was misled by this fact to its conclusion that paragraph 10 was the contract provision under which the work in question was ordered.

<sup>&</sup>lt;sup>67</sup> Paragraph 52 of the specifications (R. 54) provided that all materials for the embankment which were not available from required excavations were to be taken from borrow pits as directed by the contracting officer. That officer was to direct the location and extent of borrow pits and the Government reserved the right to change or add locations.

roneous assumption that paragraph 10 is applicable here, there is nothing in this paragraph to suggest even remotely that the kind of dispute considered in Callahan Walker should be deemed, when it arose under this contract, to involve questions of law outside Article 15. Instead, paragraph 10 provides for the determination of cost "by the contracting officer." A dispute as to the correctness of such a determination is, under the decision in Callahan Walker a dispute "concerning questions of fact" the final resolution of which, in the absence of fraud or such gross error as necessarily implies bad faith, is committed to the official designated in Article 15 of the contract.

2. After it had considered respondent's claims "upon their merits" and promulgated its findings and opinion on June 5, 1950 (R. 66), the court below, on respondent's motion, added to its findings statements that the administrative calculation of the equitable adjustment due respondent was "arbitrary and capricious, and the result arrived at by that method was grossly erroneous" (R. 170-171). Coupled with comparable language in the

Paragraph 55 (R. 58) required the contractor to remove stones with dimensions greater than five inches in otherwise approved earth materials and to place such stones in the cobble-fill portion of the embankment at the direction of the contracting officer.

Throughout this dispute, there has been disagreement as to whether the work in borrow pit No. 2 should have been classified for payment under item 14 of the schedule, under item 16, or partly under each. Whichever classification would have been correct, it is clear that the work was "included in the schedule."

court's opinion (see R. 168-169), these findings appear to mean that the decision of the department head in this case, even if viewed as involving questions of fact, was so erroneous that it could be set aside despite the finality with which the parties had endowed it in Article 15 of the contract. We submit that such an attempted justification, far from supporting the decision below, adds weighty reasons for review and reversal by this Court.

a. The rule that administrative determinations such as those provided for by Article 15 may be set aside by the courts "only \* \* \* upon allegation and proof of bad faith, or of mistake or negligence so great, so gross, as to justify an inference of bad faith" (United States v. Gleason, supra, at 607) has "never been departed from by this Court." United States v. Moorman, supra, at 461. stringent limitations on judicial review which these decisions express have been strictly enforced by this Court. Mere mistake on the part of the official designated by the contract as final arbiter is insufficient to warrant revision of his ruling. Martinsburg & Potomac R. R. Ca. v. March, 114 U. S. 549, 553-554. Nor is "gross mistake" enough. Ibid.; Ripley v. United States, 222 U. S. 144. For the agreement of the parties to be bound by the department head's decision is meaningless if construed to be effective only when the reviewing court agrees with the decision. Article 15 is not imposed unilaterally on government contractors. It embodies a deliberate bargain voluntarily, entered into by both parties that the department head's decision is "final and conclusive upon the parties," if made honestly and in good faith, and is not to be the subject of court litigation. Like every other provision of a government contract, it is an element which doubtless affects the contract price.

In this case, respondent did not even allege in his petition to the court below (R. 1-19) that the department head's decision was fraudulent or made in bad faith or so grossly erroneous as necessarily to imply bad faith. Accordingly, the suit was tried, and apparently decided initially, on no such theory. Proofs were not directed to the single material question-whether, in the light of the evidence before him, the department head had .. reached a decision so unfair as to lead to an inference of bad faith. Instead, the court below has determined de novo the amount of the equitable adjustment to which it considered respondent entitled. As we have pointed out, the court's findings of "arbitrariness," "capriciousness," and "gross error," absent from the findings as originally promulgated on June 5, 1950, were only added as amendments on June 27, 1950-a fact which strongly suggests that the decision was not? predicated upon recognition of the crucial necessity for findings of this character. And even the added findings fall short of the test laid down by this Court, for there is no statement or suggestion

by the court below that the "gross error" it attributes to the Secretary of Interior warrants an inference of bad faith.8

We submit, in short, that the Court of Claims, considering the determination of an equitable adjustment a question of law, may not have intended to hold that the determination in this case was so grossly erroneous that it could be set aside even if it was governed by Article 15. If this is so, the judgment should be reversed on the authority of United States v. Callahan Walker Co., supra. If, on the other hand, the court intended to rule on the Article 15 problem, we believe that the pleadings and the findings are on their face insufficient to sustain the holding.

b. Going beyond the pleadings and findings, we have brought to this Court all of the trial record. bearing on the claim under consideration here to show that there could be no justification for a finding, assuming the Court of Claims has made it, of the kind of gross error implying bad faith which would warrant revision of the ruling made final by Article 15. The record is devoid of any suggestion of bias, haste, or bad will.9 It shows, on the

tween respondent's employees and the Government's field force were "at all times cordial and cooperative?"

<sup>8</sup> Where the Court of Claims has explicitly and intentionally. concluded that a department head's ruling was so grossly erroneous as to imply bad faith and destroy the finality contracted for in Article 15, it has expressed this finding in so many words. See the finding added to Penner Installation Corp. v. United States, 116 C. Cls. 550, 568, affirmed by an equally divided Court, 340 L. S. 898.

The Court of Claims found (R. 69) that relations be-

contrary, that respondent's claims were considered dispassionately, intelligently, at length, and

in painstaking detail.

The court below, using what it describes as "proper accounting methods" (R. 168) which allow for idle time, has awarded an amount substantially higher than that approved by the Secretary of Interior as a rental allowance for respondent's equipment used in borrow pit No. 2 during 1940. But the court itself has made the basic error of applying the equipment rental schedule promulgated by the Bureau of Reclamation as an inflexible tariff rather than a guide to be adapted to the circumstances of the given case. 10 As a result, the court has overlooked the fact, stressed by the contracting officer and the department head (Deft. Ex. 17-V, p. 1; Pltf. Ex. E, p. 15), that the work in borrow pit No. 2 was only one item under the contract and that respondent's equipment was used continuously on some part of the project. For the other operations being performed simultaneously, respondent was being paid at unit rates which presumably reimbursed it for rental of its equipment including idle time. Respondent submitted its equipment rental claim for the work in borrow pit No. 2 simply on the basis of actual hours

by the Associated General Contractors of America, Inc., upon which the Bureau of Reclamation schedule is based, is the cautionary observation that "the rates are not determinable by any precise method of accounting and should always be applied in the light of personal experience." Pltf. Ex. 17-B, p. 1.

of operation (Pltf. Ex. 17-A, p. 1). In paying only for these hours, the responsible officials avoided possible duplication of payments respondent was receiving under other items of the contract. In any event, the obligation of the Secretary of Interior to make an "equitable adjustment" was not an obligation to employ any fixed set of rates. The fact that he adapted a standard rate guide to the special circumstances of this case is no warrant for the conclusion that his determination was "completely unrealistic and unfair."

Similarly, in computing allowances for field repairs and maintenance, the Secretary of Interior approved criteria and data which repel the inference of fraud or such gross error as implied bad faith. The respondent's figures were rejected as excessive. In their stead, rates were applied which had been gleaned from experience with similar equipment on other projects. (Deft. Ex. 17-V, p. 2 ). The department head's written decision noted that respondent had offered "no proof that such rates are unfair in this instance" (Pltf. Ex. E, p. 15). The Secretary of Interior, particularly

<sup>11</sup> The equipment rental rates used in both the administrative determination and in the decision below are designed to include "interest on invested capital, depreciation, insurance, taxes, storage, major repairs, general overhauling and painting and equipment overhead" (R. 125-126). Since there is no showing that respondent used equipment not already on the job for the work in borrow pit No. 2, the allowance by the court below of an additional sum for idle time attributable to this work may well have resulted in double payment for such factors as interest, depreciation, insurance, taxes, and storage.

in view of the technical knowledge at his disposal, had at least as much right as a jury would have in a comparable situation to reject respondent's figures as inaccurate of so unjustifiably high that they could not be deemed "equitable." And the propriety of his judgment is not diminished by the refusal of the court below to believe that maintenance and repair costs could be substantially the same for a \$205 jack hammer as for a \$20,000 t; ack (R. 168). Everyday experience contradicts the notion, which the court below seemed to regard as axiomatic, that annual costs for minor repairs and maintenance of construction equipment necessarily vary directly with the purchase price of each item.

It is not the purpose of this petition to show that the department head's decision was "correct" or that the court below was "wrong" in estimating the equitable adjustment to which respondent was entitled. We have sought merely to suggest what we believe is amply clear from the record—that the administrative determination in this case was reasoned, plausible, and wholly devoid of the kind

<sup>12</sup> While a government engineer so testified before the Commissioner (Tr. 1710); neither the contracting officer nor the department head in his written decision suggested the possible explanation that respondent's excessive maintenance rates might have resulted from improper inclusion of cost of major repairs. But whether this hypothesis occurred to them or not and whether it was correct or not, the important point is that, on the basis of technical advice of which the good faith has not been impugned, the department head found respondent's figures excessive. It would seem, therefore, that the stress in the opinion below (R. 168) on the absence of evidence that major repairs were made is immaterial.

of egregious blunder which could warrant judici revision on the ground of such gross error as imply bad faith.

#### CONCLUSION

For the foregoing reasons, it is respectfully su mitted that this petition should be granted.

PHILIP B. PERLMAN,

Solicitor General.

FEBRUARY 1951.

#### APPENDIX

#### Article 3 of the contract provides:

Changes .- The contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings and/or specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. No change involving an estimated increase or, decrease of more than Five Hundred Dollars shall be ordered unless approved in writing by the head of the department or his duly authorized representative. Any claim for adjustment under this article must be asserted. within 10 days from the date the change is ordered: Provided, however, That the contracting officer, if he determines that the facts justify such action, may receive and consider, and with the approval of the head of the department or his duly authorized representative, adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in article 15 hereof. But nothing provided in this article shall excuse the contractor from proceeding with the prosecution of the work so changed.

### Article 15 of the contract provides:

Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

## Paragraph 10 of the specifications provides:

Extras.—The contractor shall, when ordered in writing by the contracting officer, perform extra work and furnish extra material, not covered by the specifications or included in the schedule, but forming an inseparable part of the work contracted for. Extra work and. material will ordinarily be paid for at a lumpsum or unit price agreed upon by the contractor and the contracting officer and stated in the order. Whenever in the judgment of the contracting officer it is impracticable be-\_cause the nature of the work or for any other reason to fix the price in the order, the extra work and material shall be paid for at actual necessary cost as determined by the contracting officer, plus 10 percent for superintendence, general expense, and profit. The actualnecessary cost will include all expenditures for material, labor (including compensation insurance), and supplies furnished by the contractor, and a reasonable allowance for the use of his plant and equipment, where required, to be agreed upon in writing before the work is begun, but will in no case include any allowance for office expenses, general superintendence, or other general expenses.

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COLUMN FLORE CENTRE

No. 11

# In the Supreme Court of the United States

OCTOBER TERM, 1951

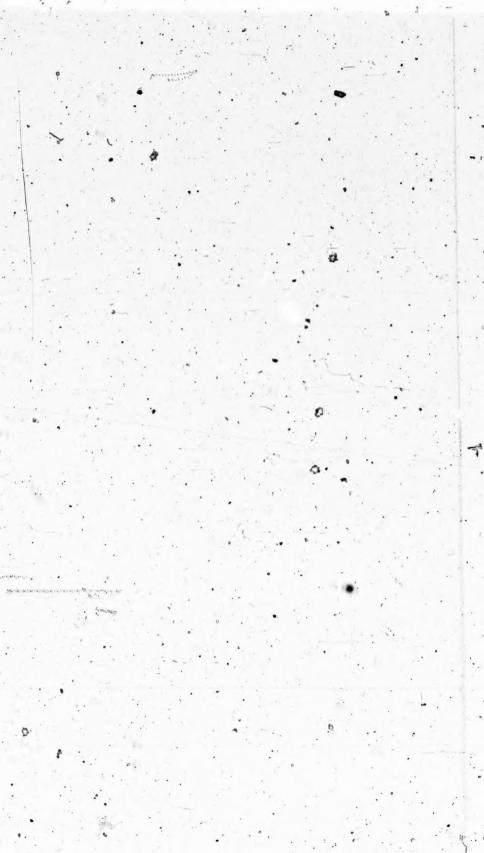
THE UNITED STATES, PETITIONER

12

MARTIN WUNDERLICH, ANN M. WUNDERLICH,
MARIE WUNDERLICH, E. MURIELLE WUNDERLICH
AND THEODORE WUNDERLICH, A. PARTNERSHIP,
TRADING UNDER THE NAME OF MARTIN WUNDERLICH COMPANY

ON WRIT OF CERTIONARI TO THE COURT OF CLAIMS

BRIEF FOR THE UNITED STATES



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# In the Supreme Court of the United States

OCTOBER TERM, 1951

No. 11

THE UNITED STATES, PETITIONER

v.

MARTIN WUNDERLICH, ANN M. WUNDERLICH,
MARIF WUNDERLICH, E. MURIELLE WUNDERLICH
AND THEODOBE WUNDERLICH, A PARTNERSHIP,
TRADING UNDER THE NAME OF MARTIN WUNDERLICH COMPANY

ON WRIT OF CERTIORARI TO THE COURT OF CLAIMS

## BRIEF FOR THE UNITED STATES

#### OPÍNION BELOW

The opinion of the Court of Claims (R. 159-170) is reported at 117 C. Cls. 92.

## JURISDICTION

The judgment of the Court of Claims was entered on June 5, 1950 (R. 170). A motion for a new trial, filed on August 14, 1950, was denied on October 2, 1950 (R. 171). By order of the Chief Justice, dated December 26, 1950, the time for filing

a petition for a writ of certiorari was extended to and including March 1, 1951 (R. 174). The petition, filed on February 28, 1951, was granted on May 7, 1951 (R. 175). The jurisdiction of this Court rests upon 28 U.S.C. 1255.

#### **OUESTIONS PRESENTED**

- 1. Whether the determination of the amount of an "equitable adjustment" for work covered by a change order is a question of fact within the standard form government construction contract provision that a department head's decision on "all disputes concerning questions of fact arising under this contract \* \* \* shall be final and conclusive upon the parties thereto."
- 2. Whether the Court of Claims may set aside such a determination in the absence of allegations, evidence, or findings of fraud or such gross error as necessarily implies bad faith.

# CONTRACT PROVISIONS INVOLVED

Pertinent portions of the contract and specifications are set forth in Appendix A, infra, pp. 32-34.

#### STATEMENT

This litigation grows out of the construction of a dam under a standard form government contract (R. 67). The contractor reserved various claims on final settlement (R. 76), sued in the Court of Claims<sup>1</sup> and was allowed \$155,748.44 on Claim No.

<sup>&</sup>lt;sup>1</sup>The contractor reserved 43 claims (R. 76) and brought suit on 21. Some of the claims were abandoned, and some were resolved in the contractor's favor by the contracting officer whose decision was affirmed by the department head.

17, the subject of this proceeding in this Court (R. 1-19, 170, 169). See Petition for Certiorari, p. 4.2 Claim No. 17 arose out of the amount awarded as an equitable adjustment under a change order.

The main feature of the contract work was the dam embankment to be constructed of earth fill of varying degrees of coarseness, cobbles, and other materials (R. 67-68). Fill materials unavailable from excavations were to be obtained "from borrow pits as directed by the contracting officer" (R. 54). The contractor was to be paid 23 cents per cubic yard for common excavation and transportation from earth borrow pits, and 35 cents per cubic yard for excavation, separation, and transportation from cobble borrow pits (R. 31). Borrow pit No. 2, the subject of the present claim, was shown on the contract drawings as one of two earth borrow pits (R. 113).

<sup>&</sup>lt;sup>2</sup> The Court of Claims allowed recovery on six contested claims in all, totalling \$164,760.83. Four claims (on which the contractor was satisfied with the departmental ruling but with respect to which payment had not yet been made) were not contested by the Government and eleven more were either abandoned or denied (R. 77, 160, 166-170).

The cobble-fill portions of the embankment were to consist of cobbles over 2½ inches in diameter (R. 61). The earth-fill portions were to consist of a mixture of clay, sand, and gravel and were to contain no stones having maximum dimensions greater than five inches. Stones over five inches in size were to be removed by the contractor from otherwise approved earth-fill materials (R. 58, 59).

<sup>&</sup>lt;sup>4</sup> The drawings also showed a cobble borrow pit, which was never used as such (R. 113).

After some earth fill excavations in 1938, this borrow pit was found to contain a large quantity of cobbles exceeding five inches in diameter (R. 114). In November 1939, when ordered to obtain additional coarse material from this pit, the contractor objected to performing the work as common excavation at 23 cents per cubic yard, contending that the large amount of oversized cobbles requiring separation warranted payment at the 35 cent rate (R. 114-115).

Following extended fruitless negotiations, change order No. 3 was issued pursuant to Article 3 of the contract (Appendix A, infra, p. 32), directing the contractor, in lieu of obtaining cobbles from the cobble borrow pit area (see note 4. supra), to use the cobbles separated from borrow pit No. 2 (R. 120-121).

The contractor thereafter filed a claim for adjustment of the amount due under the change order in the amount of \$334,994.942, subsequently increased twice (R. 121, 125), based upon its cost of performance plus 10% for superintendence, general expense and profit (R. 121). In so doing, the contractor followed the formula provided by paragraph 10 of the contract specifications (Appendix A, infra, p. 33) for "extra work \* \* \* not covered by the specifications or included in the schedule" (R. 10).

Although there was no order for payment in this manner, the contracting officer found that adjust-

ment on this basis would be equitable (R. 122). With exceptions now immaterial, the contracting officer accepted the contractor's figures for hours of labor and rates of pay, for hours of use of equipment, and for cost of materials (R. 121), but found that the rates submitted (1) for field repairs and maintenance and (2) for rental of equipment, were excessive, and allowed considerably less than the contractor claimed (R. 122).

For the contractor's maintenance and repair rates found to be excessive, the contracting officer substituted rates derived from Bureau of Reclamation experience on other projects, from work by government forces, and from experiences and practices of the Forestry Service, Bureau of Public Roads, Tennessee Valley Authority, and Colorado State Highway Department (R. 129; Deft. Ex. 17-V, p. 2).

To determine the rental allowance, both the contractor and the contracting officer used an ownership rental schedule published by the Bureau of Reclamation in deriving the divergent rental rates (R. 125). This schedule, based upon a similar schedule, published by the Associated General Contractors of America (Pltf. Ex. 17-B), lists annual rental rates for various items of construction equipment (R. 125). Dividing the annual rental rate for each item of equipment by the number of hours in an eight-month working season, at two eight-hour shifts for 30 days each month.

the contracting officer arrived at the hourly rate used in his determination. This rate was then applied to the number of hours of operation in borrow pit No. 2 during 1940 to arrive at the rental allowances for the equipment. No additional allowance was made for idle time. (R. 127.)

The contracting officer found that \$40,400.15, in addition to the \$194,784.93 already paid, was an equitable adjustment for the excavation in borrow pit No. 2 during 1940 (R. 122). This represented additional compensation of \$0.0477 per cubic yard, which the contracting officer then allowed for the 79,847 cubic yards excavated in borrow pit No. 2 during 1939 (id. p. 50; R. 122). Thus, his total award was \$44,208.85 (R. 122, 125). On appeal, the Secretary of Interior affirmed this decision (R. 125).

The contractor sought recovery in the present suit of \$181,721.10 in additional compensation for this work (R. 9-10). The Government, in its "Request for Special Findings of Fact and Brief" in the Court of Claims argued at length that, under Article 15 of the contract (R. 161-166), the departmental resolution of factual issues is final in the absence of allegation and proof of bad faith, fraud or gross mistake, citing United States v. Moorman, 338 U.S. 457. Nevertheless, the Court of Claims held erroneous the

The findings and decision of the contracting officer and the department head, part of the original transcript of record transmitted to the Court, are reprinted as Appendix B to this brief, infra, pp. 34-49.

amounts allowed both for maintenance and repair and for rental allowance. The court held that the contracting officer's computed hourly rate for rental allowances failed to provide compensation for idle time and, therefore, was "completely unrealistic and unfair" (R. 168). Applying a formula which made allowance for idle time, the court concluded that proper rental rates would total some \$30,000 more than allowed (R. 129). The allowances for field repairs and maintenance were also held to be erroneous (R. 168-169). The court held that actual costs had been improperly discarded and arbitrary hourly figures substituted (R. 168).

In an order dated June 27, 1950, on the contractor's motion, the court amended its findings of June 5, 1950, to state that the department's method of computing rental rates and the method of computing costs for repair and maintenance were "arbitrary and capricious, and the result arrived at \* \* \* grossly erroneous" (R. 170-171).

Using rates it regarded as correct, the Court of Claims allowed the contractor a total of \$155,-748.44, instead of the department head's equitable adjustment of \$44,208.85 (R. 132, 169).

The claim here involved, No. 17, covered a period of two years, 1939 and 1940. For 1940, the Court of Claims awarded \$146,166.80 as additional compensation in lieu of the \$40,400.15 allowed by the department head (R. 132). While this amounted to 17 cents per cubic yard, the court concluded that the contractor was entitled to 12 cents per cubic yard for the 79,847 cubic yards excavated in 1939, or \$9,581.64 rather than the \$3,808.70 deemed equitable by the Secretary of Interior (R. 132).

# SPECIFICATION OF ERRORS TO BE URGED

The Court of Claims erred:

- 1. In holding that the determination of an "equitable adjustment" for work performed pursuant to a change order under Article 3 of the contract was a question of law rather than a question of fact.
- 2. In failing to hold, in accordance with United States v. Callahan Walker Co., 317 U.S. 56, that the provision for final determination of disputes concerning questions of fact in Article 12 of the contract was applicable to the dispute involved in Claim No. 17 over an equitable adjustment for work performed pursuant to a change order under Article 3.
- 3. In setting aside the decision of the department head, without finding that the decision was fraudulent or so grossly eroneous as necessarily to imply bad faith, despite the contractor's agreement in Article 15 of the contract to accept decisions "concerning questions of fact" as "final and conclusive."
- 4. In setting aside the decision of the department head despite the fact that the plaintiff made no allegation of fraud or of such gross error as necessarily to imply bad faith.
- 5. In holding that the department head's rulings on Claim No. 17 were "arbitrary and capricious" and "grossly erroneous" despite the facts that (a) there was no evidence of bias, prejudice, haste, or

caprice in the administrative determination; (b) there was evidence to support the administrative determination; and (c) the standards guiding the administrative decision were relevant, intelligible, and reasonable.

6. In giving judgment for the plaintiff for \$155,-748.44 in lieu of the administrative award of \$44,208.45:

## SUMMARY OF ARGUMENT.

I

The dispute in this case relates to the amount of an equitable adjustment made pursuam to a change order authorized by the terms of a standard government construction contract. Under Article 15 of the contract, the decision of the head of the department is final and conclusive with respect to all factual disputes arising under the contract. Since this Court has held that the determination of the amount of an equitable adjustment is a factual question (United States v. Callahan Walker Co., 317 U.S. 56), it follows that the matter in dispute is clearly within the compass of Article 15.

# II

In these circumstances, the decision of the head of the department is final and binding in the absence of fraud, bad faith or the failure to exercise an honest judgment. See, e.g., United States v. Moorman, 338 U.S. 457. But the case was tried in the Court of Claims on no such theory. There

were no allegations of fraud or bad faith and this question was never put in issue by the contractor, as required by the decisions of this Court, it being suggested, if at all, only on his motion to amend the findings of the court below. Moreover, the finding of the Court of Claims that the department head's method of computation was arbitrary, capricious and grossly erroneous is not a finding of fraud, bad faith, or actual dishonesty, frequently reiterated by this Court as a necessary condition to setting aside the decision of a contractually designated agent. But even if the court below be deemed to have made the appropriate finding, the evidence upon which it was based clearly demonstrates that it must have misconceived the fundamental quality of bad faith required. The evidence is consistent only with a finding that an honest decision, even if it be deemed erroneous, was rendered. Insistence upon the maintenance of stringent standards of procedure and proof with respect to the narrow issue of fraudor bad faith is necessary if the contract rights which the Government has bargained and paid for and the decisions of this Court of almost one hundred years are to be preserved.

#### ARGUMENT

This case represents another attempt by the Government to make effective that for which it bargains and pays—the customary provision in standard construction contracts for the final settle-

ment of disputes without complex and protracted litigation. See United States v. Moorman, 338 U.S. 457. The Court of Claims' reason for not holding the department head's decision conclusive, as provided by Article 15, is not entirely clear. In a section of its opinion which introduced its discussion of a series of claims, including the claim involved here, the court held that the conclusive effect of Article 15 was limited to disputed questions of fact, and that the contested claims were not within its scope (R. 161-166). It then proceeded to consider the individual "claims upon their merits" (R. 166). It would thus appear that the court held Claim No. 17 not governed by Article 15.

With specific reference to this Claim/No. 17, the court explicitly held that the decision under Article 15 "was arbitrary and capricious" (R. 168-169), and later added that the result arrived at by the departmental method of computation was "grossly erroneous" (R. 170-171).

Neither basis of decision, however, justifies setting aside the department head's determination:

(1) the matter in dispute was clearly related to a question of fact within the compass of Article 15, and (2) no valid basis is present for rejecting the departmental decision on the disputed factual question.

Respondent has steadfastly maintained, however, that the court's discussion did not relate to the claim in issue here and that the department head's decision was set aside for other reasons (Brief in Opposition, pp. 9-10).

# The Dispute Concerned Questions of Fact

In United States v. Callahan Walker Co., 317 U.S. 56, this Court held, reversing the Court of Claims, that a dispute over the amount of an equitable adjustment under an Article 3 change order posed "inquiries of fact" and that the provisions of Article 15 were applicable.

The rule of Callahan Walker is directly applicable and cannot be avoided on the theory that paragraph 10 of the contract specifications dealing with "catra work," rather than Article 3, is the contract provision governing the equitable adjustment involved here.

The order for changes was expressly and properly issued pursuant to Article 3 as a change "in the drawings and/or specifications" of the contract—namely, a change in the designated source of cobbles for the embankment (R. 120). Paragraph 10 of the specifications, on the other hand, deals with "extra work \* \* \* not covered by the specifications or included in the schedule" (R. 34), and would seem to be irrelevant to the work in-

In determining the equitable adjustment, the contracting officer and the department head concluded that cost plus ten percent, the basis on which the contractor submitted its claim and the basis on which paragraph 10 of the contract specifications happens to provide for extra compensation, would constitute an equitable basis for settlement of the claim for 1940 excavation (R. 122, 34-35).

volved here which was both "covered by the specifications" and "included in the schedule."

But even if paragraph 10 is applicable, the nature of the dispute brings it squarely within the Callahan Watker decision. Paragraph 10 provides for the determination of cost "by the contracting officer." This is precisely the kind of question which was held to be one of fact in the Callahan Walker case. No valid basis exists, therefore, for holding Article 15 inapplicable to the present dispute.

## II

The Departmental Decision Is Conclusive in the Absence of Fraud or Bad Faith, and Neither Was Shown in This Case

\* X. The departmental decision can be disturbed only upon a showing of fraud or bad faith.—Since Article 15 is clearly applicable, the court's failure to give it effect conflicts squarely with the decisions of this Court. The contract terms, providing for

Throughout this dispute, there has been disagreement as to whether the work in borrow pit No. 2 should have been classified for payment as common excavation, or as cobble excavation. Whichever classification would have been correct, it is clear that the work was "included in the schedule."

Paragraph 52 of the specifications (R. 54) provided that all materials for the embankment which were not available from required excavations were to be taken from borrow pits as directed by the contracting officer. That officer was to direct the location and extent of borrow pits and the Government reserved the right to change or add locations. Paragraph 55 (R. 58) required the contractor to remove stones with dimensions greater than five inches in otherwise approved earth materials and to place such stones in the cobble-fill portion of the embankment at the direction of the contracting officer.

final departmental determination of disputes of fact, "are clear and precise, leaving no room for doubt as to the intention of the contracting parties. They seem to be susceptible of no other interpretation than that the action of the [government official] \* \* \* was intended to be conclusive." Kinlberg v. United States, 97 U.S. 398, 401. It is "the duty of trial courts to recognize the right of parties to make and rely on such mutual agreements." United States v. Moorman, 338 U.S. 457, 461.

The obvious purpose of such provisions is to avoid the expense and delay of litigation. Cf. United States v. Holpuch Co., 328 U.S. 234, 239-240; Martinsburg & Potomac R.R. Co. v. March, 114 U.S. 549, 553. Equally obviously, this purpose is defeated if parties who agree to the contract terms can have them nullified because they are dissatisfied with a decision by which they have contracted to be bound. Moreover, the advantages of competitive bidding will be lost to the Government if contractors are requested to submit bids on the basis of a contract providing for the final settlement of disputes by the department head, and the successful bidder is later permitted to disregard this requirement which undoubtedly was given substantial weight in the bids of others.

The judicial function in these situations is quite different from that traditionally involved in the review of administrative determinations. Article 15 is a contractual not a statutory provision. It embodies a deliberate bargain voluntarily entered into by both parties that the department head's decision is "final and conclusive upon the parties," if made honestly and in good faith, and is not to be the subject of court litigation. Like every other provision of a government contract, it is an element which doubtless affects the contract price. If the provision be deemed advantageous to the Government, the advantage has been bought and paid for and is entitled to as much effect as other agreements to arbitrate differences. This contractual aspect has been emphasized in virtually all the de-. cisions which have denied review on the merits of the dispute. "Parties competent to make contracts are also competent to make .\* ments" which provide that the agent of one of the parties may conclusively "decide every question which can or may arise relative to the execution of the contract." United States v. Moorman, 338 U.S. at 461. As the Court pointed out in the Moorman case, "Similar agreements have been held enforceable in almost every state" (p. 462).

Accordingly, this Court, uniformly holding provisions of the type in question valid and enforceable, has ruled repeatedly that "Findings of such a contractually designated agent, even where employed by one of the parties" will be "held conclusive, unless impeached on the ground of fraud, or such gross mistake as necessarily implied bad faith." United States v. Moorman, 338 U.S. 457, 461. See also United States v. Gleason, 175 U.S. 588;

602; United States v. McShain, Inc., 308 U.S. 512, 520; Merrill-Ruckgaber Co. v. United States, 241 U.S. 387, 388, 393; Plumley v. United States, 226 U.S. 545, 547; Martinsburg & Potomac R.R. Co. v. March, 114 U.S. 549, 553-554; Kihlberg v. United States, 97 U.S. 398, 402; United States v. Callahan Walker Co., 317 U.S. 56; United States v. Blair, 321 U.S. 730; United States v. Beuttas, 324 U.S. 768; United States v. Holpuch Co., 328 U.S. 234.

The decision of the Secretary of the Interior in the instant case cannot be impeached on the ground that it was permeated with fraud or rendered in bad faith.

B. Neither fraud nor bad faith was put in issue.

—In this case, the contractor did not even allege that the department head's decision was fraudulent or made in bad faith or so grossly erroneous as necessarily to imply bad faith. This was not an issue at the trial and the court below, rejecting the Government's argument that the departmental findings could be set aside only on a showing of fraud or bad faith, did not purport to be trying any question except the "claims upon their merits" (R. 166). Proofs were not directed to the single material question—whether, in the light of the evidence before him, the department head had reached a decision which could only be explained as resulting from fraud or bad faith.

. In these circumstances, the petition could have

<sup>10</sup> This is conceded in respondent's Brief in Opposition, p. 2.

been dismissed for failure to state a cause of action. But, more important, because of the failure of the contractor to place the crucial question in issue, the Government never had any occasion to defend itself against a charge of fraud or bad faith. No such charge was ever made. Obviously, the affirmative evidence, cross-examination and rebuttal evidence directed to the issue of fraud would differ sharply from that directed to the issue of reasonable cost.

As long ago as the 1878 Term, in Kihlberg v. United States, 97, U.S. 398, in holding that the designated agent's decision "cannot subjected to the revisory power of the courts without doing violence to the plain words of the contract," the Court observed that "There is neither allegation nor proof of fraud or bad faith upon his part" (p. 401). Five years later, in Sweeney v. United States, 109 U.S. 618, the contract provision for a designated agent's decision as to performance was held, in reliance upon the Kihlberg case, to preclude evidence or findings with respect to compliance with the contract in the absence of a showing of fraud or bad faith. In Martinsburg & Potomac R.R. Co. v. March, 114 U.S. 549, the following term, the Court, relying specifically upon the Kihlberg and Sweeney decisions, held that "there is no allegation that entitled the plaintiff to go behind it [the engineer's decision]; for, there is no averment that the engineer had been guilty of fraud, or had made such

gross mistake in his estimates as necessarily implied bad faith, or had failed to exercise an honest judgment in discharging the duty imposed upon him. The first count of the declaration was, therefore, defective for the want of proper averments showing plaintiff's right to sue on the contract, and the demurrer to that count should have been sustained" (p. 553). Again, in *United States* v. Gleason, 175 U.S. 588, decided in 1900, the Court pointed out that judicial revision of the decision of a contractually designated agent "could only be done upon allegation and proof of bad faith" (p. 607)."

In the Smith case, it does not appear that any contractual provision for a departmental decision was squarely applicable to the dispute in question. In any event, the Court obviously did not regard the dispute as within any such provision and merely held that a contract to remove "clay, sand, gravel, and boulders" did not obligate the contractor to remove "a bed of limestone rock" (256 U.S. at 17). Moreover, the Court's decision in the Smith case must be read in the light of the more recent decision in United States v. Blair, 321 U.S.

730, 736.

Respondent contends further (Brief in Opposition, p. 12)

The weight of these decisions can hardly be deemed overturned by either Ripley v. United States, 223 U.S. 695, or United States v. Smith, 256 U.S. 11, relied on by respondent (Brief in Opposition, pp. 11-12). In Ripley v. United States, this Court twice remanded the case to the Court of Claims (220 U.S. 491; 222 U.S. 144) for a precise finding on the specific issue of bad faith. Upon the first remand, 220 U.S. at 496, the Court of Claims was required "to explicitly find whether or not that which it states was manifest was or was not known to the inspector and whether that subordinate official acted in good or bad faith in the various refusals recited." On the second occasion, the Court of Claims finding was regarded as still deficient because it did not contain "a finding as to knowledge on the part of the inspector and an unequivocal finding as to his good or his bad faith" (222 U.S. at 147). It cannot be assumed that this Court contemplated findings of this precise character without the production of evidence directed to the particular issue.

These decisions, as recently reaffirmed in United States v. Moorman, supra, have been understood to deny the right "to have the cause litigated on its merits" and to confine "the case to the question of the contracting officer's fraud or gross mistake implying bad faith." Lindsay v. United States, 181 F. 2d 582, 584 (C.A. 9). It also has been held that an issue framed on the merits of the dispute "could not properly be brought before the court" and that "the receipt of evidence" on this issue "was a futility." United States v. Foster Transfer Co., 183 F. 2d 494, 496, 497 (C.A. 9).

C. Neither fraud nor bad faith was found by the Court of Claims.—But even if the defect in the pleadings and the issue framed be overlooked, the court's findings fall short of the test laid down by this Court as necessary to justify "reconsidering the questions decided by the designated agent of the parties" (United States v. Moorman, 338 U.S. at 463). For there is no statement or suggestion that the "gross error" it attributes to the Secretary of Interior warrants an inference of bad faith.

After it had considered the contractor's claims "upon their merits" and promulgated its findings and opinion on June 5, 1950 (R. 66), the court below, on the contractor's motion, added to its find-

that the Government's awareness of the issue of good frith was evidenced by the statement of its counsel in the course of trial "that the only controversy now between the parties is as to the fairness of the so-called rental rate." We submit that the issue of the "fairness" of a rate is at opposite poles with the issue of the honesty of the person who is charged with deciding what is a fair rate.

ings statements that the departmental calculation of the equitable adjustment was "arbitrary and capricious, and the result arrived at by that method was grossly erroneous" (R. 170-171).

Unless this case is to be the occasion for overruling a century of precedent, the failure to find fraud, bad faith or, in other words, a dishonest judgment, precludes judicial interference with the contract of the parties. This rule has "never been departed from by this Court." United States v. & Moorman, supra, at 461.

As long ago as Burchell v. Marsh, 17 How. 344, this Court ruled that if an award "contains the honest decision of the arbitrators" it will not be set aside for "mere error of judgment" (pp. 349, 350). It warned against treating "the arbitrators as guilty of corrupt partiality, merely because their award is not such an one as the chancellor would have given" (p. 350), and concluded, even though it regarded the assessment of damages as arbitrary, that the arbitrator's decision was not "so outrageous as of itself to constitute conclusive evidence of fraud or corruption" (p. 351).

In the Kihlberg case, supra, decided some 20 years later, we find articulation of the rule in almost the precise terms in which it has survived to the present day. In that case, the fixing of distances for which the Government was to pay transportation charges was committed to a chief army quartermaster. Although the distances so fixed

were alleged to be somewhat less than "the distances by air line, or by the road usually travelled", the Court held that "in the absence of fraud or such gross mistake as would necessarily imply bad faith, or a failure to exercise an honest judgment, his action in the premises is conclusive" (97 U.S. at 401, 402).

In virtually identical language, this formulation of the rule has been repeated in numerous decisions of this Court. Sweeney v. United States, 109 U.S. 618, 620 (1883) ("the court below found that there was neither fraud, nor such gross mistake as would necessarily imply bad faith, nor any failure to exercise an honest judgment"); Martinsburg & Potomac R. R. Co. v. March, 114 U. S. 549, 553 (1885) ("there is no averment that the engineer had been guilty of fraud, or had made such gross mistake in his estimates as necessarily implied bad faith, or had failed to exercise an honest judgment"); Chicago & Santa Fe Railroad v. Price, 138 U.S. 185, 195 ("there is no fact distinctly found indicating fraud or such gross mistakes \* \* \* as imply bad faith"); United States v. Gleason, 175 U.S. 588, 602, 609 (1900) ("in the absence of fraud or of mistake so gross as to necessarily imply bad faith, such decision will not be subjected to the revisory power of the courts"); Ripley v. United States, 222 U.S. 144; 148 (1911) (the court must find "gross mistake" such as "excluded the possibility of the exercise

of an honest judgment," and make "a direct and unequivocal finding as to " \* bad faith"); Ripley v. United States, 223 U.S. 695, 704 (1912) (there must be "fraud, or gross mistake implying fraud"); Goltra v. Weeks, 271 U.S. 536, 548 (1926) (judgment conclusive "in the absence of bad faith"); United States v. Callahan Walker Co., 317 U.S. 56, 59 (1942) ("no findings that the contracting officer \* \* did not honestly decide"); United States v. Moorman, 338 U.S. 457, 461 (1950) (departmental findings "conclusive, unless impeached on the ground of fraud, or such gross mistake as necessarily implied bad faith").

To preserve the contract of the parties, the rule has been stringently maintained against subtle relaxation. On at least two occasions, this Court has rejected a finding of "gross mistake" as the basis for upsetting the contractual decision. In Martinsburg & Potomac R. R. Co. v. March, supra, the jury was instructed that the final estimate of. the engineer was conclusive unless he was guilty of fraud, intentional misconduct, or "gross mistake." It was held that "this modification was well calculated to mislead the jury, for they were not informed that the mistake must have been so gross, or of such a nature, as implied bad faith" (114 U.S. at 553). Similarly, in Ripley v. United States, supra, a finding of "gross mistake" was not regarded as a sufficient basis for implying "bad faith" (222 U.S. at 148). Other characterizations of the contractual agent's decision, such as "inadequate and unjust" (Martinsburg & Potomac R.R. Co. v. March, supra, at 554-555), and "wrongful and unjust" (United States v. Gleason, supra, at 608), have been held insufficient to overturn it.

In the light of this old and well-established doctrine, rejection by the court below of the decision of the contractually designated agent was error since it made no finding of fraud, bad faith, or the failure to exercise an honest judgment.

D. The record contains no evidence upon which a finding of fraud or bad faith could be rested.—
The Court of Claims was apparently of the view, however, that its findings provided a sufficient basis for upsetting the decision of the Secretary of the Interior (R. 168-169). Since the opinion specifically addressed itself to this Court's decision in the Moorman case (R. 162-163), we must assume that the court was aware of the necessity of finding fraud or bad faith. But if the court regarded its finding as one of bad faith, not only did it not say so but the finding, if made, would also be without evidentiary support in the record.

<sup>12</sup> Its opinion (R. 159, 168-169) contains the following:

We conclude that the plaintiff did not agree, by signing this contract, to be bound by administrative decisions made in disregard of the practices of trade, of proper accounting methods, and of the known facts as to actual costs. Nor did it agree to be bound by computations based on arbitrarily chosen figures which on their face show that they must be wrong. We conclude that the administrative treatment of this important claim of the plaintiff was arbitrary and capricious.

Going beyond the pleadings and findings, we have brought to this Court all of the trial record bearing on the claim under consideration here to show that there could be no justification for a finding, assuming the Court of Claims has made it, of the kind of gross error implying bad faith which would warrant revision of the ruling made final by Article 15.13 The record is devoid of any suggestion of bias, haste, or bad will.14 It shows, on the contrary, that the contractor's claims were considered dispassionately, intelligently, at length, and in painstaking detail.

The court below, using what it describes as "proper accounting methods" (R. 168) which allow for idle time, has awarded an amount substantially higher than that found equitable by the Secretary of Interior as a rental allowance for the contractor's equipment. But the court itself has made the basic error of applying the equipment rental schedule promulgated by the Bureau of Reclamation as an inflexible tariff rather than a guide to be adapted to the circumstances of the given case. As a

the contractor's employees, and the Government's field force were "at all times cordial and cooperative."

<sup>13</sup> The entire transcript of testimony has been transmitted to this Court (R. 172, 173, 174). For the convenience of the Court the Government has reprinted in a separate volume, as Appendix C to its brief, all the testimony "which either party deems to be material to the errors assigned" (R. 172).

14 The Court of Claims found (R. 69) that relations between

by the Associated General Contractors of America, Inc. upon which the Bureau of Reclamation schedule is based, is the cautionary observation that "the rates are not determinable

result, the court has overlooked the fact, stressed by the contracting officer and the department head (Deft. Ex. 17-V, p. 1; Pltf. Ex. E, p. 15, Appendix B, infra, p. 47), that the work in borrow pit No. 2 was only one item under the contract and, as the respondent concedes (Br. in Opp., p. 6), that the contractor's "equipment was constantly shifting back and forth between work in Borrow Pit No. 2 and other items of the work."

It was reasonable for the contracting officer and the department head to assume that the rates paid for other work under the contract, which called for use of the same equipment, provided adequate compensation for any time the equipment was required to remain idle. Consequently, the inclusion of an idle time factor for additional work not contemplated in the original contract would necessarily result in duplication. In view of the department head's finding that the equipment "was used continuously on a two-shift basis on some part of the project," his decision appears clearly correct in holding that "hourly rates shown in the rental schedule, applicable only when equipment is used for short periods, or intermittently, and intended to compensate for moving and setting up equipment for short-time jobs, cannot be al-(Plfs. Ex. E, p. 15, Appendix B, infra, p. 47.)

by any precise method of accounting and should always be applied in the light of personal experience." Pltf. Ex. 17-B, p. 1.

But even if this judgment is incorrect, the manner of consideration of the question destroys any possibility that the decision was dishonest. This conclusion is fortified by the finding of the contracting officer that the rates employed "have been accepted by other contractors as equitable in payment of extra work at cost plus" and "are, in fact, higher than rates for some equipment used on War Department projects for similar work". (Pltfs. Ex. C, pp. 49-50, Appendix B, infra, pp. 42-43), and the finding of the department head that "the rates have been found fair by the Bureau of Reclamation and by other contractors in the past," and that "the contractor offers no proof to support its claim that the rental rates submitted by it are justifiable" (Pltfs. Ex. E, pp. 14-15, Appendix B, infra, pp. 46, 47).

Similarly, in computing allowances for field repairs and maintenance, the Secretary of Interior approved criteria and data which repel the inference of fraud or such gross error as implied bad faith. The rates allowed "were determined by the contracting officer on the basis of Bureau of Reclamation experience on similar work and the experience and research of other Federal and State agencies." (Pltfs. Ex. E, p. 15, Appendix B, infra, p. 48; Deft. Ex. 17-V, p. 2). The department head's decision also noted that the contractor had offered "no proof that such rates are unfair in this instance" (Pltf. Ex. E, p. 15, Appendix B, infra, p. 48).

The Secretary of Interior, particularly in view of the technical knowledge at his disposal, had at least as much right as a jury would have in a comparable situation to reject the contractor's figures as inaccurate or so unjustifiably high that they could not be deemed "equitable." Certainly, there would be such right when, as here, the contractual provision upon which the contractor relied by analogy (Paragraph 10 of the Specifications; see supra, p. 4) guarantees not "actual cost" but "actual necessary costs". [Emphasis supplied].

It is not our purpose, however, to show that the department head's decision was "correct" or that the court below was "wrong" in estimating the equitable adjustment to which the contractor was entitled. Even if it be thought that evidence of experience on other projects is not the "correct" or the best method of ascertaining the proper amount of an equitable adjustment in a particular case, it is not the kind of error which can be regarded as tainted with fraud, bad faith or dishonesty. We believe it is amply clear from the record that the Department's determination in

Commissioner (Tr. 1710), neither the contracting officer nor the department head in his written decision suggested the possible explanation that the contractor's excessive maintenance rates might have resulted from improper inclusion of cost of major repairs. But whether this hypothesis occurred to them or not and whether it was correct or not, the important point is that, on the basis of technical advice the good faith off which has not been impugned, the department head found the contractor's figures excessive. It would seem, therefore, that the stress in the opinion below (R. 168) on the absence of evidence that major repairs were made is immaterial.

this case was reasoned, plausible, and wholly devoid of any evidence to justify the suspicion, much less make necessary the inference, that it was motivated by bad faith.

Since the finding of the Court of Chims represents no more than a disagreement, in matters involving judgment, with the departmental decision, fraud or bad faith can be deemed to exist only in the imputed sense in which it was found in *Penner Installation Corp.* v. *United States*, 114 C. Cls. 571, 116 C. Cls. 550, affirmed by an equally divided Courf, 340 U.S. 898.

Shortly after announcement of his Court's decision in the *Moorman* case, the Court of Claims modified its findings in the *Penner* case, in which it had previously awarded judgment based on mere disagreement with departmental findings, to include, without any change in pleadings or the evidence, a new finding that the decision of the department head was arbitrary and so grossly erroneous as to imply bad faith. In that case, bad faith was found to flow from the combination of what the court considered substantial error and the lack of impartiality of the departmental head deduced from the fact that he was an employee of the Government and had made an erroneous decision.

Since the department head is customarily designated final arbiter, the Court of Claims could find the same lack of impartiality in every case in which it believed substantial error existed, and

conclude that the error and lack of impartiality together constituted "bad faith". Surely, this Court's insistence upon actual bad faith and not mere error cannot be defeated by a chain of reasoning which infers lack of impartiality from error, and bad faith from lack of impartiality.

Unless appropriate standards of proof are established, therefore, the unbroken line of decisions of this Court upholding Article 15 and comparable provisions may be rendered meaningless. To avoid this result it is necessary, we believe, to strike down the *Penner* reasoning and to require issues in the Court of Claims to be made not on the merits of a claim but on the specific issue or fraud or bad faith, in the sense of actual dishonesty, as the decisions have held. The specific allegation of fraud or bad faith should be required and only evidence directed toward the proof of that allegation should be admitted.

Evidence going to the merits of the claim should be excluded unless it is also shown that this evidence had been presented for departmental consideration and was rejected not because of any disagreement

States, 116 C. Cls. 679, the Court of Claims concluded that an equitable adjustment was "lacking in that impartiality demanded in the settlement of disputes arising between a contractor and the Government" (p. 683), and set aside the decision of the head of the department as "arkitrary and capricious and so grossly erroneous as to imply bad faith." The Court said (116 C. Cls. at 684) "When we say that bad faith is to be implied, we mean only what in Penner Installation Corporation v. United States, supra, we said this expression connotes".

with respect to its value, but because of bad faith. It is obvious that a finding of "gross error" which "necessarily" gives rise to the inference of bad faith on the part of the designated agent, must be predicated upon an appraisal of the evidence which the agent had before him at the time he acted. A man cannot act in bad faith by failing to accord weight to evidence which he has neither seen nor heard; likewise, the reviewing court is not in a position to conclude that the agent's decision was so grossly erroneous as necessarily to imply bad faith if the evidence upon which the agent based his decision is unknown to the court.

In Ripley v. United States, 220 U.S. 491, although the Court of Claims had found that the Government's designated agent had improperly refused to allow the imposing of crest rocks on a jetty at a time when "it was manifest" that the conditions for performing that work were satisfied, this Court returned the record to the Court of Claims "to explicitly find whether or not that which [the court] states was manifest was or was not known to the inspector." 220 U.S. at 496. See, also, Ripley v. United States, 222 U.S. 144, 147-148; Burchell v. Marsh, 17 How. 344, 349-350.

Only if the issue of fraud or bad faith is sharply drawn by the requirement of proper pleading, if proof is limited to evidence directly probative of the narrow issue, and if nothing short of a finding of actual fraud of bad faith adequately supported

will be permitted to impugn the designated agent's decision, can the Government hope to avoid the vexatious litigation which it has sought to guard against in its contracts. In the present case, fraud or bad faith was neither pleaded, proved nor found.

## CONCLUSION

For the foregoing reasons, it is respectfully submitted that the judgment below should be reversed.

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SEPTEMBER, 1951.

### APPENDIX A

# Article 3 of the contract provides:

Changes .- The contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings and/or specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. change involving an estimated increase or decrease of more than Five Hundred Dollars shall be ordered unless approved in writing by the head of the department or his duly authorized representative. Any claim for adjustment under this article must be asserted within 10 days from the date the change is ordered: Provided, however, That the contracting officer, if he determines that the facts justify such action, may receive and consider, and with the approval of the head of the department or his duly authorized representative, adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in article 15 hereof. But nothing provided in this article shall excuse the contractor from proceeding with the prosecution of the work so changed.

# Article 15 of the contract provides:

Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

# Paragraph 10 of the specifications provides:

Extras.—The contractor shall, when ordered in writing by the contracting officer, perform extra work and furnish extra material, not covered by the specifications or included in the schedule, but forming an inseparable part of the work contracted for. Extra work and material will ordinarily be paid for at a lump-f sum or unit price agreed upon by the contractor and the contracting officer and stated in the order. Whenever in the judgment of the contracting officer it is impracticable because the nature of the work or for any other reason to fix the price in the order, the extra work and material shall be paid for at actual necessary cost as determined by the contracting officer, plus 10 percent for superintendence, general expense, and profit. The actual necessary cost will include all expenditures for material, labor (including compensation insurance), and supplies furnished by the contractor, and a reasonable allowance for the use of his plant and equipment, where required, to be agreed upon in writing before the work is begun, but will in no case include any allowance for office expenses, general superintendence, or other general expenses.

#### APPENDIX B

The findings and decision of the Contracting Officer and the Head of the Department with respect to Claim No. 17 are as follows:

CONTRACTING OFFICER'S FINDINGS AND DECISION

"Claim for payment of material removed from Borrow Pit No. 2 at actual cost as provided in form B Order for Changes Nø. 3."

Amount claimed	In	Date
Not stated	Letter to Construction Engineer—	Dec. 16, 1939
Not stated	Statement of claim—Exhibit 1 Statement of claim—Exhibit 2	Jan. 24, 1940 Mar. 25, 1940
Not stated \$181,721.10	Statement of claim—Exhibit 4	Feb. 16, 1942
\$181,721.10 \$204,720.49	Release on contract—Exhibit 5 Letter to Chief Engineer—Exhibit 20	Mar. 14, 1942 June 23, 1942

# FINDINGS OF FACT

1. This item of the claim is a request for payment, at \$0.35 per cubic yard, for material excavated in 1939 and, at cost plus 10 percent, for material excavated in 1940 from borrow pit No. 2. Payment has been made, under item 14 of the schedule, for the material in question. The amount claimed in the above statements is in addition to previous payments, and the amount stated in the release on contract is arrived at as follows:

Excavation during 1939 Claimed—79,847 cu. yds., at \$0.35	100
Balance claimed by contractor	\$ 9,581.64
Excavation during 1940 Claimed—Cost pius 10 percent \$366,924.39 Paid—846,891 cu. yds., at \$0.23 194,784.93	
Balance claimed by contractor	172,139.46
Total claimed by contractor	\$181,721.10

The contractor's letter of June 23, 1942 (exhibit 20), was filed after the release on contract was executed and revised the supporting data for Item No. 17 of the claim, increasing the claim by \$22,999.39

- 2. This item of the claim has been the subject of numerous conferences and much correspondence. The first protest in connection with this item was in a letter to the Construction Engineer dated December 16, 1939, in which the contractor's chief clerk protested the November 1939 estimate, one of the reasons being:
- A copy of this letter is attached and marked "Exhibit 20A." As a result of the conferences with the contractor, it was concluded that the contractor's claim should be given further consideration.
- 3. Paragraph 52 of specifications No. 705 provides that materials for the embankment shall be taken from required excavation for the dam or from borrow pits as designated by

the contracting officer. The specifications provide for the location and extent of borrow pits as follows:

borrow pits shall be as directed by the contracting officer, and the Government reserves the right to change the location of such borrow pits or to locate additional borrow pits as required, but such pits will be located as close as feasible to the work in which the borrowed materials are to be used. ...."

Borrow pit No. 1 was located by the Construction Engineer on the right or north side of the Pine River within the area designated as "earth embankment borrow pit area" on drawing No. 191-D-45, which is included in specifications No. 705. The materials encountered in this borrow area were generally satisfactory for use in the earth-fill portion of the embankment with very little separation of cobbles. When borrow pit No. 1 was exhausted as a source of embankment material. another borrow area, designated as "Borrow Pit No. 2," was located by the Construction Engineer on the left or south bank of the Pine River, partly within the borrow-pit area shown on the south side of the river by drawing No. 191-D-45, and marked as "earth embankment borrow pit area." The materials from some parts of borrow pit No. 2 contained a much higher percentage of cobbles in excess of 5-inch diameter than did the material from borrow pit No. 1. The contractor protested the requirements for separation of cobbles and claimed payment for all materials taken from borrow pit No. 2 as excavation and separation of excavation in borrow pits under item 16 of the schedule of specifications. The contracting officer could not agree to this asserted claim for payment under item 16 of the schedule. The contracting officer did, however, recognize the following considerations:

(a) That borrow pit No. 2 was located, in part, off the area designated as a borrow-pit area on drawing No. 191-D-45.

(b) That a considerable percentage of cobbles occurred in borrow pit No. 2, requiring expensive separation operations to meet the specification requirements.

- (c) That the use of materials from borrow pit No. 2 resulted in the production of enough cobbles for most of the cobble fill required on the downstream face of the dam and eliminated the need for a cobble borrow pit. The foregoing considerations were found to be a basis for an adjustment in the price for excavation from borrow pit No. 2 and negotiations were entered into for an agreement with the contractor for such adjustment.
- 4. During the course of the negotiations, several alternative settlements were proposed to the contractor, none of which were agreed to. When it became apparent that an agreement could not be reached, order for changes No. 3 (exhibit 21), in the form prescribed in

those cases where no agreement as to adjustment of compensation can be secured with the contractor, was recommended to the Commissioner for approval on August 31, 1940. The approved order was transmitted to the contractor on October 7, 1940. On December 28, 1940, the contractor presented its claim under order for changes No. 3. This claim was subsequently revised several times and, on April 8, 1941, was presented as supporting data for item No. 17 of the claim and used in the contractor's statement of claim dated February 16, 1942 (exhibit 4). Copies of the contractor's letter of April 8, 1941, and the summary sheets for the supporting data are attached and marked "Exhibit 22." The hours of labor and rates of pay for the contractor's employees, the equipment used and the hours of use, and the cost of materials as set out in the claim were all checked and found to be substantially the same as shown by the records kept by the Government. The minor exceptions to these items are set out in the tabulation in paragraph 6 hereof. The equipment rental rates as submitted by the contractor were found to be excessive, as is discussed in the following paragraphs of these findings.

5. Although the contractor's presentation of claim was, in all submissions, on the basis of claimed actual cost plus 10 percent for all operations involved in excavation, separation, and transportation to the embankment of all materials removed from borrow pit No. 2, the con-

tracting officer recognized that an equitable adjustment would entitle the contractor only to the cost of the separation operations as an' additional payment. However, it was found difficult to segregate costs of separation from those of excavation and transportation, and it was therefore agreed that the adjustment of compensation should be made on the basis of actual cost of all operations plus 10 percent. In the consideration of these costs as claimed, it was found, as stated in paragraph 4 above. that the rates stated for all items of the claim except the rental rates for equipment in use could be agreed upon. Attached and marked "Exhibit 23A" is a comparison of the equipment rental rates as claimed by the contractor and as determined by the contracting officer and as used in computing the allowances under the proposed "Adjustment of Compensation" under order for changes No. 3.

6. On July 29, 1941, an "Adjustment of Compensation" was mailed to the contractor. The contractor has never accepted the proposed adjustment and the matter of adjustment of price for excavation in borrow pit No. 2 is now in the status of a claim. A copy of this proposed adjustment is attached and marked "Exhibit 23." Following is a summarized statement of the costs plus 10 percent for operations during 1940, as claimed by the contractor and as determined by the contracting officer:

		Contractor's	Contracting officer's	
tem	Description	claim d	etermination	
1	Labor (excavation, transportation, and separation of materials)	\$ 53,049.78	\$ 52,847.78	
2	Labor (moving, remodeling, and erecting screening plant)	125 16 1	9,583.85	
3	Compensation insurance, public liability, and taxes:	The state of the state of	6,236.82	
	Equipment rental and operating allow-	274,404.00	145,230.07	
5	Materials (explosives)	94.59	94.59	
6	10, percent for superintendence, general expense, and profit	33,356.76	21,144.97	
	Total due contractor	\$366,924.39	\$235,185.08	
	Amount paid to contractor— 857,671 cu. yds., at \$0.23	194,784.93	194,784.93	
	Balance due contractor	\$172,139.46	\$ 40,400.15	
		1		

Exceptions by the contracting officer to the contractor's statement are as follows:

Item 1.—The contractor claimed \$755.00 for operating rollers on the fill. This is properly a part of placing operations and, having been allowed in the payments under item 19 of the schedule of specifications No. 705, no additional allowance can be made for roller operation.

Item 2.—The contractor originally included this item in the plant valuation. It properly belongs in the labor costs and was so included as allowable labor costs in the contracting officer's determination.

Item 3.—This difference is due to the changes consequent to the determination of allowable labor costs as noted under items 1 and 2 above.

Item 4.—Rates used by the contractor apparently are hourly rates for all equipment.

In the contracting officer's determination, the rates used are in accordance with the Bureau's standard schedule of equipment rental rates dated January 2, 1940, and are on the basis of two-shift-per-day rates except in the case of the light plants where one-shift-per-day rates are used.

Item 5.—No exceptions.

Item 6.—The contractor included item 3 in the total used for calculating the 10 percent for profit. In the contracting officer's determination, item 3 was omitted in computing the 10 percent for superintendence, general expense, and profit.

7. The contractor's letter of June 23, 1942 (exhibit 20), revising the supporting data for item No. 17 of the claim and increasing the amount of the claim, contains the following statement:

because costs of moving the plant and adapting it to borrow pit No. 2 were erroneously included as a capital charge whereas it was and should have been handled as a direct charge against the operation in that borrow pit. Also the rental or depreciation rate was based on the original cost of the screening plant only and did not include reinforcing and remodeling costs which were necessary before the

plant functioned as an economical unit.

The "Adjustment of Compensation" included the costs of moving, erecting, and remodeling the plant as a direct labor charge. However, it is noted that in taking this labor out of the capital valuation the contractor failed to change the total charge for the use and depreciation of the plant. The contractor has increased the hours of work for some of the equipment and added items of equipment to this later submission of claim. In view of the many changes made in this later submission. and because items of the earlier statement of claim were checked by the contracting officer and found essentially correct, except for equipment rental rates, the revised figures submitted have been disregarded.

8. As set forth in the foregoing paragraphs, the major items remaining in controversy are the basis for equipment rental rates and the basis for allowance for work done in 1939. The other items of the statement of the contractor's costs have been accepted by the contracting officer with a few minor exceptions. The equipment rental rates as used in the "Adjustment of Compensation" are rates established as standard by the Bureau's equipment rental schedule and have been accepted by other contractors as equitable in payment of

extra work at cost plus. They are, in fact, higher than rates for some equipment used on War Department projects for similar work. It is, therefore, found that the proposed adjustment has allowed reasonable rates for equipment rental. The allowance for the work done in 1939 was made by the contracting officer on the basis of the unit costs of the work done in 1940 in the same area, for which records were kept. The contractor has submitted no supporting data to justify the unit price of \$0.35 per cubic yard as claimed for the work done during 1939. It is, therefore, found that the adjustment of compensation based on the unit costs of work during the 1940 season in the same area as determined by the contracting officer constitutes an equitable adjustment for the work done during 1939.

# SUMMARY OF FINDINGS

- 9. From the foregoing statements of fact, the following summary of findings is made:
- (a) The contractor is entitled to an equitable adjustment of compensation for this item of the claim.
- (b) The contractor's supporting data of April 8, 1941, were checked, found correct with exceptions herein noted, and were accepted as to hours of labor and rates of pay for labor, materials used, and equipment used

and hours of such use except for roller used on the embankment. The rates of pay for equipment rental were not accepted.

(c) The equipment rental rates used by the Government in determining the "Adjustment of Compensation" are based on eight-hourshift rental rates, rather than hourly rental rates as used by the contractor. These eight-hour-shift rental rates are accepted by other contractors in payment for extra work and are found to be equitable rates for the work in question.

(d) The allowance for work done in 1939 is based on the unit cost as determined in the "Adjustment of Compensation" for work done in the same area in 1940, and it is found that this is an equitable basis for payment.

## DECISION OF THE CONTRACTING OFFICER

10. After a careful review of all the facts and circumstances in connection with this item of the claim, it is the conclusion of the contracting officer that the proposed "Adjustment of Compensation" which has been heretofore offered the contractor is a just and equitable settlement of this item of the claim, and it is found that additional payment should be made to the contractor in the amount of \$44,208.85, as determined in the above-referred-to "Adjustment of Compensation."

DEPARTMENT HEAD'S FINDINGS AND DECISION

"Claim for payment of material removed from Borrow Pit No. 2 at actual cost as provided in Form B Order for Changes No. 3."

Borrow Pit-No. 2, located partly within the area designated on Drawing 191-D-45 as "earth embankment borrow pit area," contained a large percentage of cobbles, requiring expensive separation operations to meet the specification requirements. Excavation and separation of materials in this area resulted in production of enough cobbles to eliminate the need for opening a cobble borrow pit, as provided for in the specifications. tracting officer found the above facts basis for making an equitable adjustment of the contract. price. Finding it impossible to reach an agreement with the contractor regarding such adjustment, the contracting officer issued Order for Changes No. 3 in the form prescribed in those cases where no agreement on price can be reached. By letter dated April 8, 1941, the contractor's claim for work performed in 1940 under the change order, computed on a cost plus 10% basis, was submitted.' For material excavated in 1939, the contractor requested payment at the rate of 35¢ per cubic yard, the schedule price for cobble excavation. total amount claimed in this letter is the figure used in the exception on the release on contract dated March 14, 1942. After the release on contract was executed, the contractor filed a revised statement, increasing the amount

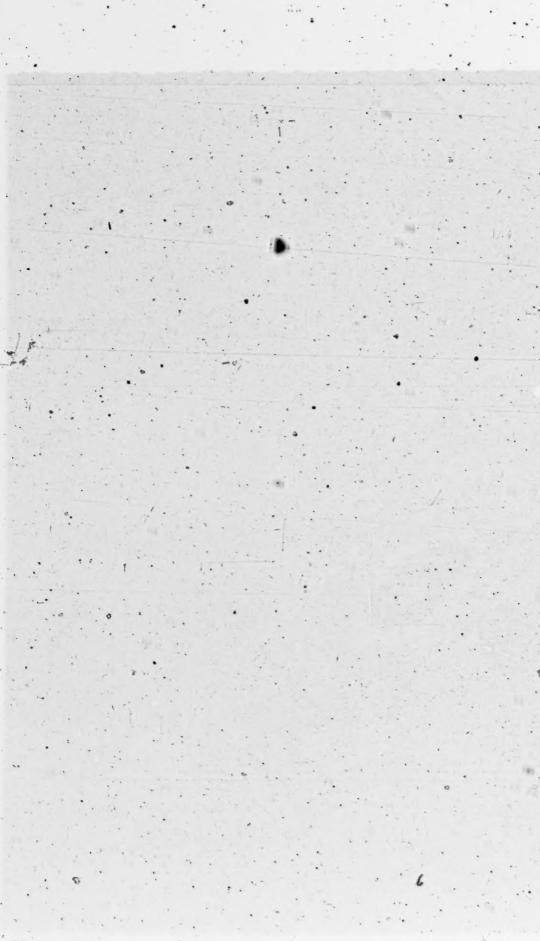
claimed. However, the contractor apparently bases its appeal on the claim set out in the letter of April 8, 1941. In any event, since the release on contract constitutes a full and binding release of the Government's obligations beyond the exceptions made a part of the release, any amount allowed here must be

within the exception.

The contracting officer found payment of cost plus 10% to constitute an equitable basis for settlement of the claim for 1940 excavation. The records of the Government and the data contained in the contractor's letter of April 8, 1941, as to the equipment used and hours of use, rates of pay and hours of labor of the contractor's employees, and amount and cost of material used, are substantially in accord. The contractor, on appeal, seriously contests contracting officer's findings only with regard to the equipment rental rates and amounts allowed for maintenance, fuel and lubricants.

The contractor offers no proof to support its claim that the rental rates submitted by it are justifiable. An examination of the record leads to the conclusion that the rental rates as computed by the contracting officer are fair in all particulars, and the contractor's claim for equitable adjustment under Change Order No. 3 should be allowed on that basis. The equipment rental rates used by the contracting officer are those set out in the Equipment Rental Schedule issued by the Bureau of Reclamation on January 2, 1940. The rates in this schedule are based on the Associated Gen-





eral Contractors of America, Inc., report on "Contractors' Equipment Ownership Expense", and take into consideration interest, depreciation, insurance, taxes, storage, equipment overhead, major repairs, general overhauling, painting, and a period of idle time each year for each piece of equipment. The rates have been found fair by the Bureau of Reclamation and by other contractors in the past.

The contracting officer correctly computed rentals on a two-shift per day basis for all equipment with the exception of the light plant, for which rental on a one-shift per day basis was allowed. The equipment, with the exception of the light plant, was used continuously on a two-shift basis on some part of the project. The hourly rates shown in the rental schedule, applicable only when equipment is used for short periods, or intermittently, and intended to compensate for moving and setting up equipment for short-time jobs, cannot be allowed.

A careful check of contracting officer's computations discloses no mathematical errors. The apparent mistake specifically pointed out by the contractor in the computation of allowance for lubricants for the caterpillar tractor is due to a typographical error made in the letter to the contractor dated June 25, 1941 (Exhibit Y, Contractor's Appeal). The total amount allowed is correct. The letter shows an allowance of \$0.01 per horsepower hour for lubricating oil. The figure actually used

by the contracting officer is \$0.001 per horsepower hour.

The maintenance rates and the allowances for fuel, lubricating oil and grease were determined by the contracting officer on the basis of Bureau of Reclamation experience on similar work and the experience and research of other Federal and State agencies. The contractor offers no proof that such rates are unfair in this instance.

Rental rates for the Lima dragline and the screening plant appear to have been properly computed by the contracting officer. The capital value of the dragline after additions were made was used. To determine the rental rate for the dragline, the formula used by the contracting officer is the Associated General Contractors' formula, by which the capital value of the equipment is multiplied by the ownership rate shown in the schedule to arrive at the monthly rate, and this figure divided by thirty, the number of shifts per month, to determine the first shift rate. The same formula was used in determining the rental rate for the screening plant. The depreciation rate used for computing depreciation of the screening plant accords with the depreciation rate shown for heavy duty pit and quarry plants in the Associated General Contractor's report and the Bureau of Reclamation Rental Schedule.

No proof is offered by the contractor to sustain its claim for payment at the rate of 35¢ per cubic yard for material excavated from borrow pit No. 2 in 1939. Allowance made by

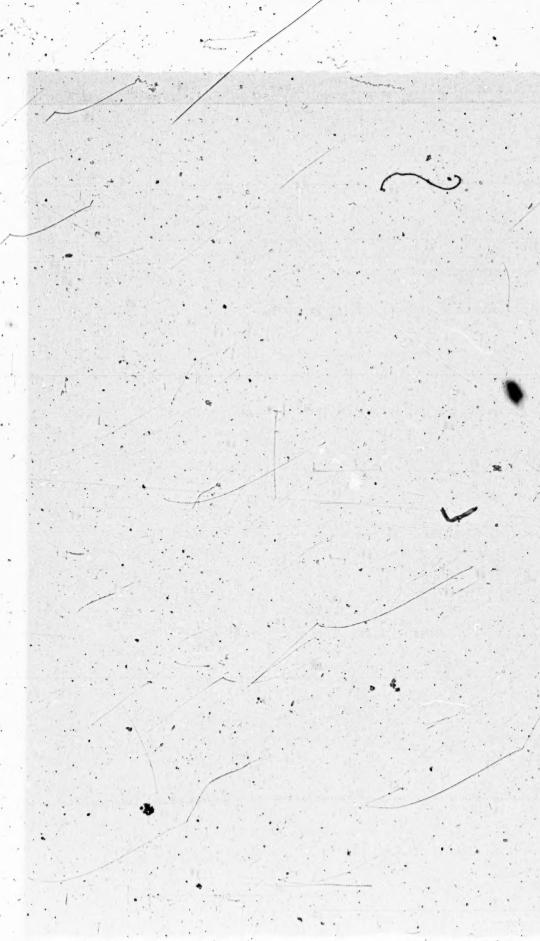
the contracting officer of a unit increase over the bid price for earth borrow excavation equal to the unit increase allowed for excavation and separation of material in 1940 appears to constitute an equitable adjustment in price under Change Order No. 3 for excavation in 1939.

The contracting officer's finding that a total of \$44,208.85, in addition to the 23¢ per cubic yard previously paid to the contractor for excavating and separating this material, be allowed the contractor on Claim It in No. 17 is affirmed, and contractor's appeal on this claim dismissed.

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# APPENDIX C

#### IN THE UNITED STATES COURT OF CLAIMS

Martin Wunderlich, Ann M. Wunderlich,
Marie Wunderlich, E. Murielle Wunderlich, and
Theodore Wunderlich,
Partnership, Trading Under the Name of
MARTIN WUNDERLICH COMPANY,

V

#### THE UNITED STATES

No. 46307

Denver, Colorado, June 11, 1945, Monday, at 10 o'clock a. m.

#### TESTIMONY FOR PLAINTIFF

The parties met, at the time above stated, in Room 314, Post Office Building, Denver, Colorado.

#### Present:

Hon. Neal L. Thompson, Commissioner; George R. Shields and Harry D. Ruddiman, Esqs., counsel for plaintiff.

James J. Sweeney, Esq., counsel for defendant.

On order of reference by the Honorable, The United States Court of Claims, in the above-ea-

titled cause, testimony on behalf of the plaintiff was taken as follows:

(The reporter was duly sworn.)

Martin Wunderlich, a witness produced on behalf of the plaintiff, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

#### 2 Direct Examination

# By Mr. Shields:

- Q. 1. State your name, age, residence and occupation. A. Martin Wunderlich, contractor, and my occupation, of course, is construction work.
- Q. 2. Your age and residence? A. My age is 46 and I live at 7 Crestmore Drive, Denver.
- Q. 3. Are you one of the plaintiffs in this case?
  A. Yes, sir.
- Q. 4. The plaintiff is alleged to be a partnership. Name the partners in the partnership. A. There is Ted Wunderlich, E. Murielle Wunderlich, Marie Wunderlich, Ann Wunderlich, and myself. I am the managing paytner.
- Q. 5. How long have you been engaged in the construction business? A. Since 1920.
- Q. 6. The matter in litigation here is a structure known as the Vallecito dam on the Pine River in Colorado? A. Yes.
- Q. 7. Before taking this dam you had done similar work in other locations, and name some of them. A. I have done some work at Fort Peck

and Augusta, and, of course, I have done a lot of large earth moving jobs throughout different states, namely, Minnesota, Missouri, Iowa, Kansas, Oklahoma, Alabama, Mississippi, Pennsyl-

vania, Colorado and Montana, and some jobs in Illinois and some other states, Wisconsin.

- Q. 8. What was the essential character of the work at Vallecito dam? A. Mostly earth moving and earth moving operations.
- Q. 9. What was the character of it? A. A contractor.
- Q. 10. What was the character of the dam? A. It was an earth fill compacted—earth compacted fill dam.
- Q. 11. About the dimensions? A. It is about four thousand feet long and approximately a hundred and fifty feet high.
- Q. 12. And contains approximately what yardage of materials? A. Approximately five million yards.

Q. 13. All of which had to be moved and placed in the dam? A. Yes, sir.

- Q. 14. State whether or not in advance of bidding on this work you inspected the site and with whom and how and with what result? A. Well, Mr. Leonard and myself went over the site.
- Q. 15. Who is Mr. Leonard? A. He is my general superintendent and engineer.

- Q. 40. Had any test pits been made over that area? A. No, sir.
- Q. 41. Had test pits been made over the area shown on the right-hand side of the river as borrow pit? A. In the earth embankment borrow pit, but not outside of the lines shown on the drawing.
- Q. 42. Why did you think it would be unnecessary to build a pit—

Mr. Sweeney: We pray Your Honor's judgment, he is asking this witness to tell you why Mr. Burns didn't think—

Commissioner Thompson: Yes.

Mr. Shields: Very well.

# By Mr. Shields:

- Q. 43. Did you eventually prepare and submit a bid for the doing of this work and was your bid successful? A. Yes, sir, we did.
- Q.44. Did you enter into a contract? A. Yes, sir, we did.
- Q. 45. I show you a certified copy of the contract and the specifications, which contain the drawing you have been referring to, and ask you if that is the contract you entered into and of what date. (Handing paper to witness.) A. That is the contract entered into the 14th day of March, 1938.
- Q. 46. And the attached papers cover the contract specifications and are made a part of that contract? A. Yes, sir,

Mr. Shields: I offer the document just identified in evidence as Plaintiff's Exhibit A.

Mr. Sweeney: No objection.

(The document above referred to, marked Plaintiff's Exhibit A, is filed in connection with this case.)

Commissioner Thompson: Before we go any further, is the river right on this little narrow line? The Witness: Yes, sir.

Commissioner Thompson: And this part is the river?

The Witness: No.

Commissioner Thompson: This is what we call the swampy area?

(Discussion off record.)

# By Mr. Shields:

Q. 47. Were you prepared with equipment and otherwise to complete this job in the time you agreed to complete it? A. Yes, sir.

Q. 48. You have already said it was essentially an earth moving job. A. Yes, sir.

Q. 49. What about giving the Court some idea of the extensiveness of the equipment that was necessary to put on the work? A. It was

necessary to put on tractors. I think we had approximately twelve tractors and about six scrapers, two Lima shovels and one is equipped as a dragline and shovel and one of them equipped as a shovel. Then one Lorain shovel, yard and a half; then we had three eight-yard trucks and eight eight-yard Euclid trucks and twelve bottom-dump

twelve-yard Euclid trucks and six end-dump twelve-yard Euclid trucks. Then, of course, we had compressors and flat-bed trucks and pickups and cars, and a large operating plant to separate material, separate rock from the earth.

Q. 50. A screening plant? A. A screening plant and separating plant, and we had rake dozers, bull-dozers.

Q. 51. What is a rake dozer? A. A rake dozer is a dozer that was attached to our tractor and it would rake out the rock as it would go over the piles and it would level the piles.

Q. 52. In other words, you could by that machine take rock of a certain size out of the embankment materials? A. Yes, we could.

Q. 53. Was there ever any complaint you didn't have complete and adequate equipment on the job for doing the work properly? A. No, sir.

Q. 54. What about the labor situation? Did you ever have any difficulty in securing your necessary labor? A. No, sir, we had sufficient labor.

Q. 55. How often were you yourself on the work? How much of your time, would you say? A. Oh, I was frequently on the job. I just don't know how to estimate that, but I would be on the job whenever it was necessary, and, of course, I made frequent trips to the job.

Q. 56. Whether you were there or not, you kept in constant touch with the work? A. I was always

in touch with the work, either by telephone or by reports.

Q. 57. Would you say you were there on an average of one day a week, or more or less? A. Well, yes, I would say I was there on an average of one day a week.

Q. 58. Whom did you employ as superintendent on the job? A. F. H. Stewart was the superintendent.

Q. 59. What would you say as to his competency as a superintendent? A. Well, he is known as one of the best superintendents there is on that type of construction, earth construction.

Q. 60. Who was his assistant? A. Johnny New and Floyd Helm.

Q. 61. State whether or not you, after this job was over, took them with you to Panama,

Mr. Sweeney: If Your Honor please, we object to what took place after this job. I think it is legal window dressing.

Commissioner Thompson: All right, I will sustain the objection.

## By Mr. Shields:

Q. 62. State whether you had been on large earth moving jobs previously. A. Yes, sir.

Q. 63. You knew their competency? A. Yes, sir.

Q. 64. Was there ever any complaint made by the Government representative that either one lacked in competency or ability on this kind of job? A. No, sir, there wasn't.

Q. 65. State whether in the course of operations numbers of matters of controversy or dispute arose as between you and the construction engineer, representing the contracting officer. A. There did.

Q. 66. What in general was the attitude of Mr. Burns, the construction officer, about giving you written directions to do kinds of work you considered outside of what you were required to do?

Mr. Sweeney: We pray Your Honor's judgment, we object to the form of the question. It calls for a conclusion. What are the facts?

Were there some complications between them concerning the orders? Let us have the facts.

Commissioner Thompson: So far there isn't any allegation about any fraud or misconduct or anything of that kind. I do not know what the point of the testimony is, but I will overrule the objection for the time being and let him go ahead.

Mr. Sweeney: Exception, if Your Honor please.

A. Mr. Burns refused to give us any written instructions when we asked for them.

#### By Mr. Shields:

Q. 67. State whether or not you made a protest in all cases where Mr. Burns required you to do work you considered outside the contract requirements. A. Whether?

Q. 68. Whether you protested against doing it.

Commissioner Thompson: What kind of a protest are you talking about, oral or written? A. We did ask for written instructions on it. If there was something we didn't agree with we would ask for written instructions and he would refuse to give it to us.

Commissioner Thompson: You protested orally Is that right?

15

The Witness: Yes, sir.

Commissioner Thompson: All right, go ahead.

# By Mr. Shields:

Q. 69. State whether or not as a result of all these controversies a large number of claims were asserted by you and whether you had negotiations back and forth over a year or more about the settlement of those claims. A. Yes, sir, we did.

Q. 70. I show you five folders. The first is marked B-1, being a letter with exhibits dated 1-15-40.

Mr. Sweeney: If Your Honor please, my brother is now referring to—

# By Mr. Shields:

letter dated January 24th, 1940, giving details of a number of claims asserted, and a third folder marked B-3, being a letter dated February 29th to the contracting officer, further amplifying the details of the claim, and a fourth folder containing

Q. 71. And a second folder marked B-2, being a

your letter of March 25th, 1940, with further explanations and pictures explaining claims, and a fifth folder, being correspondence.

Mr. Shields: Now, this you haven't got, Mr. Sweeney.

# By Mr. Shields:

Q. 72. Extending from February 8th, 1940; down to October 17th, 1940, being letters received from, or copies of letters sent to, either the construction engineer or the contracting officer, with reference

to one of the other of these various claims.

16 It is all the correspondence we could find.

Mr. Sweeney: If Your Honor please, I want to cooperate with my friend in every way possible, but this simply offering generally—

Commissioner Thompson: Let me make this suggestion as to that last exhibit: Mr. Sweeney hasn't seen it.

Mr. Sweeney: I have seen none of these.

(Discussion off record.)

Mr. Sweeney: The first exhibit Brother Shields is offering is a letter which I understand is dated January 15th, 1940, and designated as Plaintiff's Exhibit B-1. I have not seen that letter and it does not appear to be a part of the contracting officer's file, so, obviously,—

Mr. Shields: If you will just bear with me a min-. ute, Mr. Sweeney

Mr. Sweeney: Yes, parden me, Your Honor.

# By Mr. Shields:

Q. 73. I ask you, Mr. Wunderlich, whether all the letters in these five folders purport to be copies of letters written by you or actually written and sent. A. They were either written by me or under my instruction.

Q.74. And were sent? A. And were sent, yes, sir.

Q. 75. And whether all the copies, or what purport to be copies of letters included in these folders, were copies of letters received from

the Reclamation Bureau, either the construction engineer or the contracting officer? A. Yes, sir.

Commissioner Thompson: Let them be filed subject to verification.

Mr. Sweeney: And also subject if Your Honor please, to the qualification that they are self-serving declarations and unsworn statements and obviously will not be binding.

Commissioner Thompson: All right.

Mr. Sweeney: I would like to examine, if Your Honor please, that first document, Exhibit B-1. Obviously this is correspondence between the parties and we are not objecting to the copies because they are all subject to verification.

If Your Honor please, first Exhibit B-1 is apparently a claim submitted by the plaintiff and is dated January 15th, 1940. That evidently was the first submission. Is that correct?

Mr. Shields: Yes.

Mr. Sweeney: I think it is subject to the objection we noted, if Your Honor please.

Commissioner Thompson: All right.

Mr. Sweeney: However, they do appear to have been documents that have been addressed to either

the contracting officer or his representative.

18 Mr. Shields: I was preparing to offer them.

Mr. Sweeney: We do not object to the correspondence, if Your Honor please. (Pltf's B-1 to B-5 received.)

#### By Mr. Shields:

- Q. 76. State whether or not you eventually received from the contracting officer his decision on his findings of fact on the various claims you have submitted. A. I did.
- Q. 77. I show you this document, certified by the Department of the Interior, and ask you if that is the contracting officer's decision and findings with the supporting exhibits. A. Yes, that is.

Mr. Shields: I offer in evidence Plaintiff's Exhibit C.

Mr. Sweeney: No objection, if Your Honor please. This is a document that has been tendered to the plaintiff by the defendant.

Commissioner Thompson: Let it be received in evidence.

(The document above referred to, marked Plaintiff's Exhibit C, is filed in connection with this case.)

By Mr. Shields:

Q. 78. State whether or not you appealed from the decision of the contracting officer to the Secretary of the Interior. A. Yes, sir.

Q. 79. I show you a document marked Exhibit D and ask you if that is a copy of your appeal to the Secretary of the Interior. A. Yes, sir.

19 Mr. Shields: I offer in evidence Plaintiff's
Exhibit D.

(The document above referred to, marked Plain tiff's Exhibit D for Identification, is filed in connection with this case.)

By Mr. Shields:

Q. 80. State whether or not you later received a decision from the Secretary of the Interior on the various claims? A. Yes, sir.

Q. 81. Is the document I hand you, marked E.

the decision? A. Yes, sir.

Mr. Shields: I offer in evidence Plaintiff's Exhibit E.

(The document above referred to, marked Plain tiff's Exhibit E for Identification, is filed in connection with this case.)

Mr. Sweeney: No objection.

Commissioner Thompson: Let it be received.

(The document above referred to, previousl marked Plaintiff's Exhibit E for Identification, i

now received in evidence and filed in connection with this case.)

# By Mr. Shields:

Q. 82. I show you a folder marked Plaintiff's Exhibit F, and ask you if that contains one of your copies of all estimates made by the contracting offi-

cer covering work done under this contract.

53

20 A. Yes, sir.

(The document above referred to, marked Plaintiff's Exhibit F, is filed in connection with this case.)

## By Mr. Shields:

Q. 83. On the pages opposite the estimates are copies of various letters to the contracting officer, relating to or protesting this or that omission, and ask you if all those letters were written. A. Yes, sir. Q. 84. And all such letters were received? A.

Yes, sir.

Mr. Shields: I offer this document, Plaintiff's Exhibit F.

Mr. Sweeney: May I see it? No objection. These are the monthly vouchers.

Commissioner Thompson: All right, they will be received in evidence.

(The documents above referred to, previously marked Plaintiff's Exhibit F for Identification, is received in evidence and filed in connection with this case.)

# By Mr. Shields:

Q. 85. I show you a volume certified by the Department of the Interior as being the Extra Work Orders issued by the contracting officer during the progress of the work and ask you if those were re-

ceived. Those are the work orders so issued?

A. Yes, sir. 21

Mr. Shields: I offer Plaintiff's Exhibit G in evidence.

Mr. Sweeney: No objection. This also is a document made available by the defendant, Your Honor.

Commissioner Thompson: Let it be received in evidence.

(The document above referred to, marked Plaintiff's Exhibit G, is filed in connection with this case.)

#### By Mr. Shields:

Q. 86. I show you another folder containing the Change Orders, order of changes, and I will ask you if those were the change orders issued. A. Yes. sir.

Mr. Shields: I offer in evidence Plaintiff's Exhibit H.

Commissioner Thompson: It will be received in evidence.

· (The document above referred to, marked Plaintfff's Exhibit H, is filed in connection with this case.)

#### By Mr. Shields:

Q.87. State whether or not, Mr. Wunderlich, you have prepared, or caused to be prepared, a folder containing all correspondence you could find pertaining to each separate item of claim named in the Petition. A. I don't just know what you mean by that.

Q. 88. Take claim No. 1, named in the Petition.

Does this folder contain whatever correspondence you could find in your files pertaining to that particular claim? A. Yes, sir, it does.

Q. 89. Is that true of folder No. 2, and so forth, corresponding with numbers in the Petition? A. Yes, sir.

90. State whether or not the letters in each of these folders, the copies of letters in each of these folders, purporting to be written, were actually written and sent as indicated by the copies. A. Yes, sir.

Q.91. Were the letters, purporting to be the original or copy of the letter received from the contracting officer or his representative, actually received? A. Yes, sir.

Q. 92. Do these folders contain all the correspondence you have been able to locate pertaining to these separate items of claims? A. Yes, sir.

Mr. Shields: I now offer in evidence Plaintiff's folder 1 as Plaintiff's Exhibit 1.

No. 17, being the correspondence relating to claim 17 of the Petition, appearing—

Commissioner Thompson: 17 on page 147

Mr. Shields: 17 on page 14 I now offer in evidence as Exhibit No. 17.

(The document above referred to, marked Plaintiff's Exhibit No. 17, is filed in connection with this case.)

Mr. Shields: 17-A. I offer in evidence another folder marked 17-A, which is additional correspondence on the same subject relating to claim 17.A.

Commissioner Thompson: Why is that?

Mr. Shields: 17 is a big item of claim and there is a lot of correspondence.

Commissioner Thompson: This correspondence is directly between the parties?

Mr. Shields: Yes, in all cases.

Commissioner Thompson: All right.

(The document above referred to, marked Plaintiff's Exhibit No. 17-A, is filed in connection with this case.)

Just confine your answer to the work you did in connection with the spillway. A. The spillway on the Vallecito dam job was a small part, but the large part is the borrow pits.

XQ. 226. We are only speaking of the spillway. Please just confine your answer to that. A. All right.

XQ. 227. This job you did at Fort Peck, was it at all comparable to the work you did on this job at an elevation of 7500 feet? A. Well, I think the elevation up there, as I remember it, was 3400 feet.

XQ. 228. Where are you speaking of now? A. Fort Peck,

XQ. 229. Fort Peck, yes. A. The Vallecito elevation was higher.

XQ. 230. Seventy-five hundred feet, wasn't it? A. Yes, seventy-six.

XQ. 231. Tell His Honor, please, if it is not a fact construction operations carried on at that high altitude were considerably more difficult than the same kind of work at a lower altitude? A. They are more expensive.

63 XQ, 232. Very much more expensive? A. Yes, sir.

XQ. 233. And at the time you made your bid or gambled on this job, you had had no prior experience of excavating at higher altitudes? A. Oh, yes. Prior to that I excavated at eight thousand feet.

XQ. 234. How about construction operations? You hadn't had any experience in that? A. Yes, sir.

XQ. 235. What construction operations had you actually done? A. We excavated the Idaho Springs job up there about eight thousand feet, between Evergreen and Idaho Springs.

XQ. 236. You said you excavated it, Mr. Wunderlich, is that correct? A. We had to excavate the gravel and culverts and all of the structures on that job.

XQ. 237. Were you a subcontractor? A. No, sir. XQ. 238. You were the principal contractor? A. I was the principal contractor.

88 XQ. 367. Who is Mr. Levy? A. He was the former partner.

XQ. 368. Isn't it a fact he had a half interest in this equipment? A. No, sir, he had no half interest in this stuff at all.

XQ. 369. In none of it? A. No, sir.

XQ. 370. Didn't he bring equipment to the job you leased? A. No, sir. I got some of the equipment that came off the road job.

XQ. 371. When you started this job did you have equipment other than that? A. Yes. These Euclids were all new Euclids, bottom dump Euclids, brand new from the factory.

XQ. 372. You say these were all new? A. That were hauling from this borrow pit, yes, sir.

XQ. 373. When did Dave Levy, of Denver, work for you? A. Our partnership broke up in August of 1938.

XQ. 374. That was the first season you started this job. A. That is right.

XQ. 375. Isn't it a fact you continued using the equipment that Mr. Levy had a half interest in?

A. He had no interest at all.

### 99 By Mr. Sweeney:

XQ. 440. We are discussing the job you were going to use this plant on. For your information, these questions relate to the Vallecito dam, in connection with which this screening plant was to be used on.

Commissioner Thompson: I have always tried to be very liberal in cross examination, but go ahead. He did the work; he completed the contract.

Mr. Sweeney: And he is suing the Government for a half million dollars.

Commissioner Thompson: What difference does it make whether he had an engineer or whether he didn't? I don't see the materiality of it at all.

### By Mr. Sweeney:

XQ. 441. Now, at this point the various exhibits were offered in connection with your claim. May we ask you, please, are your books and records available for examination in connection with each of the items of the claim? A. Yes, sir.

XQ. 442. Where are those books and records located now? A. Some of them are here and some of them are in Jefferson City.

100 XQ. 443. Would it be convenient for you to assemble all the records relating to this

claim that are either in Jefferson City or Denver A. Yes, sir.

XQ. 444. Will they be available for examination A. Yes, sir.

XQ. 445. At this point in your examination, in your direct examination, so far as material, you discussed the materials that were placed into Zone 1, or as you called it, Sections 1 and 3 of the embankment. Now, first—A. When I said "Sections," I meant zones.

XQ. 446. Tell His Honor, please, if it isn't a fac No. 1 zone is on the upstream side? A. Yes, sir.

XQ. 447. And that contained a coarse gravelly material and it might contain rocks up to five inches—A. That is right.

XQ. 448. —in diameter? A. Yes, sir.

XQ. 449. And that material required screening to eliminate oversized rocks? A. It required separating.

XQ. 450. And you either use your separating plant or you use the bulldozer with the rake at tachment? A. Yes, sir.

about that was damaged, do you recollected today about how many pieces of that equipment

was damaged in these operations that were involved in Item No. 1? A. It was mostly the Euclids that got the rough part. I think we had something like twelve bottom dump Euclids.

XQ. 491. About how many were damaged on the job? A. All that worked on that particular borrow pit.

XQ. 492. Tell His Honor, please, if it is not a fact that this same equipment has been used by you on other jobs before you used it on this one. A. No, sir. These bottom dump Euclids were new on the job.

XQ. 493. Did you use any second-hand equipment at all? A. Oh, yes.

XQ. 494. You used a lot of it on this particular job? A. Not a lot of it. It wasn't so very second-hand, either. It was good equipment in good condition.

XQ. 495. That is, the time you used it was beginning this job and the second-hand equipment was in good condition? A. It was brand new equipment came to that job in the spring of 1939.

XQ. 496. Was there any reason why you should have used all new equipment on this particular part of the work? A. Because the old equipment couldn't navigate there.

COBBLESTONE EXCAVATION AND FILL.

### **Direct Examination**

## By Mr. Shields:

Q. 1209. The next item of claim is No. 17, Cobblestone Excavation and Fill. What source of supply for cobble fill was shown on the drawings? A. We were to get our cobbles from required excavation and the balance from the cobble borrow.

Q. 1210. Where was the cobble borrow pit located as delineated on the contract? A. It was located on the left side of the river and the down252 stream side.

Q. 1211. Downstream from the dam? A. Downstream from the dam.

Q. 1212. Where did you get the cobbles used in this work? A. The cobbles were gotten on the upstream side of the left side of the river, known as No. 2 pit.

Q. 1213. Any from required excavation A. Yes, and some from required excavation.

Q. 1214. What was this pit finally numbered, this upstream pit labeled "Earth Borrow Pit"? What was it finally numbered? A. No. 2.

Q. 1215. And where was it located? A. On the left side of the river upstream from the dam.

Q. 1216. Whether or not that was a greater or a farther distance from the place the cobbles had to

be placed than the borrow pit shown on the drawings? A. Yes, it was a much longer haul.

Q. 1217. What would you say as to whether the cobbles from this pit had to be hauled 2,500 feet, the limit of the free haul under the contract for hauling of cobbles? A. Yes, it had to be hauled much farther than that.

Q. 1218. Now, give the Court something of the situation as it developed that occasioned 253 your getting cobbles from what was known as the earth pit instead of the cobble pit shown on the drawings? A. Well, we were ordered to go into No. 2 pit to excavate for earth embankment. And we protested and stated that this wasn't an earth pit borrow, that it was a cobble borrow, that all the earth had been stripped off prior to the start of this excavation.

Q. 1219. When did that taking of the earth occur? A. That occurred in 1938, and this occurred in 1939.

Q. 1220. In Pit 2? A. In borow pit 2. We went in there in 1938 and excavated and removed the earth that was on the top.

Q. 1221. How thick a layer of earth was on top, would you say? A. Oh, there was approximately anywheres from five to ten feet of earth.

Q. 1222. Did you then or not excavate down to the depth specified by the contracting officer? A. Yes, sir, we excavated down until we hit this cobble borrow—until we hitQ. 1223. And did you by that operation get about all of the available materials that would be classed as earth suitable for zone 2 in the dam? A.

254 Yes, sir.

Q. 1224. And what remained in the pit when you completed that operation? A. There remained the cobbles, cobbles and earth.

Q. 1225. Then in 1939, what was required? A. In 1939 the contracting officer asked us to go in there to take out some of this material for cobble embankment and for sections in zone 3, and at that time the contracting officer told us that we would be paid "cobble borrow".

Q. 1226. This was in 1939? A. This was in 1939. We excavated approximately 79,000 yards of cobble and earth material. When we received our estimate we protested and said that we were not paid in accordance with the contract and also in accordance with Mr. Burns' statement.

Q. 1227. Did the estimates for that period include this cobble excavation you made in 1939? A. Yes, sir.

Q. 1228. Did that include pay for the cobbles you excavated in 1939? A. Qh, no, sir, the estimate did not include the payment for cobbles. That only included earth borrow.

Q. 1229. What is the difference between cobble excavation and earth excavation in price? A. The price was twenty-three cents on earth borrow and thirty-five cents on cobble borrow.

Q. 1230. While we are on that: What was the occasion for the difference in price? Why did you in your bidding fix a different price? A. Because the cobbles had to be separated. They had to go through a separation process and, of course, it was more expensive to excavate cobble material.

Q. 1231. What did you do when you found that you were not being paid as for cobble excavation in 1939? A. We wrote the engineer and protested.

Q. 1232. What did he say about it? A. He said that due to the fact that it was labeled "earth borrow," he couldn't pay us "could borrow."

## By Commissioner Thompson:

Q. 1233. Who made up these estimates, you or the Government? A. The Government.

### By Mr. Shields:

Q. 1234. You have already said that you did not keep an engineer on the work at that time and relied on the Government engineer for the determination of quantities? A. Yes, sir.

Q. 1235. And that was done here? A. Yes, sir.

Q. 1236. Was what was known as Pit 2 eventually or not the pit shown on the drawing on the right-hand side of the river? A. On the left

right-hand side of the river? A. On the lef 256 side of the river.

Q. 1237. I mean on the left side of the river. A. That is right.

Q. 1238. And whether or not this cobble excavation you are now talking about was within the Pit 2 extended? A. The excavation that was made in the fall of 1939 was within the limits of this.

Q. 1239. Now, what happened in 1940? A. That was outside the limits, but inside and outside the limits of the borrow pit.

Q. 1240. Were you not required to extend Pit 2, and if so, in what direction? A. We were required to extend it upstream and also south of the river.

Q. 1241. South would be toward the hills? A. Toward the hills, yes, sir.

Q. 1242. And were those extensions within or without the area specified as Borrow Pit No. 2? A. Those extensions were outside of the Borrow Pit No. 2.

Q. 1243. And therefore was there anything on the drawing that would class the extension here either as an earth or a cobble borrow? A. 257 No, there was nothing on the drawing.

Q. 1244. What would you say was the fact whether the extensions extended into cobble or earth borrow pits? A. The extensions were cobble in that the pits were all cobble that we excavated in 1940.

Q. 1245. Did you get a yard of material out of Pit No. 2 as extended in 1940 that was other than cobble, that is, that didn't have to be separated either on the screening plant or on the embankment? A. No. We separated either through the screening plant or with our rake dozer.

Q. 1246. What did the contracting officer say about paying as for excavation for cobble in 1940? A. In 1940 he wanted to pay for it as earth borrow, and we protested. And in the spring of 1940 he offered to pay us 250,000 yards of cobble. That wasn't satisfactory. And then the rest would be earth. And then later they offered to pay me an adjustment of five cents a yard, and that wasn't satisfactory.

Q. 1247. That is, five cents more than the earth excavation price? A. Yes, sir, five cents more than

the earth excavation price.

Q. 1248. Would that have covered all material, or merely cobbles out of the material? A. It would have covered all the materials exca-

vated in the borrow pits. Then I kept protesting and asking for some decision on it and then they submitted a change order wherein they stated that they would pay a certain area cobble borrow, known as Area 1 in Borrow Pit 2. This wasn't acceptable and I again took it up with Mr. Burns and then went to Denver and took it up with the contracting officer and they issued me a B order 3. They gave me a letter stating that they would issue me a B order 3.

Q. 1249. What do you mean by "B order"? The Court wouldn't understand that. A. The B order means that you would go ahead and do the work and that an equitable adjustment would be made after the work was completed.

Q. 1250. Did you threaten to pull out of the pit and refuse to work there?

Mr. Sweeney: Pray Your Honor's judgment. Let the witness testify.

Commissioner Thompson: Yes, it is somewhat leading, but go ahead. A. Yes, I did. I was unable to get any agreement from Mr. Burns and I was unable to get an agreement up at Denver, so I finally went to Denver—I think it was in July of 1940—sometime the latter part of July or the first part of August—and told them that unless I got an agreement on this material that I would stop all the work, that I could not continue to excavate this pit for earth borrow prices. Then they issued a letter by Mr. Harper wherein he said I would be furnished a B order as soon as it could be prepared. In October of 1940 I received

### By Mr. Shields:

the Border.

- Q. 1251. Was that or not Change Order 3 that is in evidence? A. Yes, sir.
- Q. 1252. The change order in evidence appears to be dated in August. How do you account for the fact that the order was thus dated and you did not get it until October? A. I don't know why. I went in several times. I kept going in and asking for it, and finally I got it in October.
- Q. 1253. All the correspondence relating to this matter is in evidence as Plaintiff's Exhibit 17? A. Yes, sir.

Q. 1254. Or, 17-A. What did you understand by the promise under Change Order 3, Form B, of an equitable adjustment after the work was completed? A. That the work would be paid on a cost plus ten per cent.

Q. 1255. In your Petition you claim payment was for the cobble excavation done in 1939 at the

contract rate of thirty-five cents for cobble excavation? A. Yes, sir.

Q. 1256. For the work done in 1940, you claim on a cost plus basis. Why the difference between the two years? A. Well, in 1939 the contracting officer said I would be paid under cobble. In 1940—

Q. 1257. Just a moment. With that promise did you or did you not feel it incumbent upon you to keep any record of actual costs for the 1939 excavation? A. No, sir, we did not keep any cost.

Q. 1258. In 1940 you claim on cost plus basis. A. That is, we did not keep any cost of that actual operation there. We have costs of our operations, but we did not keep any costs that—

Q. 1259. Any separate costs? A. Any separate

costs, that is right.

Q. 1260. Did you or not keep a true and accurate cost of doing the work as done in 1940? A. Yes, sir.

Mr. Shields: I will defer asking about the costs, other than that they were kept. There are others who are more familiar with how they were kept and the results of such keeping.

## By Mr. Shields:

Q. 1261. You did instruct that careful costs be kept of doing the work in 1940? A. Yes, sir.

Q. 1262. And to the best of your knowledge—

Mr. Sweeney: Pray Your Honor's judgment, if some other witness is going to testify concerning the costs—

Commissioner Thompson: He can testify to the best of his knowledge as to what was done. Objection overruled.

Mr. Sweeney: All right. We reserve the right to cross examine him.

# By Mr. Shields:

Q. 1263. Were you ever paid anything at all in excess of earth excavation for the cobbles you have obtained in the manner you have described from locations other than those described "borrow pit" on the drawings? A. No, sir.

Q. 1264. Whether or not the contracting officer as an equitable adjustment did say you were entitled to something on such account? A. Yes. He found that I was entitled to cost plus ten per cent. But we could not agree on the rental of equipment.

Q. 1265. In other words, you could not agree on what the costs were? A. No, sir. That is, the maintenance of equipment and the rental of equipment was agreed on—I asked—

Q. 1266. Do you remember what amount 262 he found might be due on account of the cobble work? A. He found there was due me \$44,000.

Q. 1267. What would you say about that as representing anything approximating your actual costs? A. That is less than one-fourth of my actual costs.

Q. 1268. I believe you stated awhile ago you at one time made certain offers. A. Let us get this straight. That is less than one-fourth of my additional costs over what I have been paid.

Q. 1269. You said awhile ago you had been made some offers. How does this final finding of the contracting officer compare with the previous offers made—five cents a yard additional? A. Oh, the five cents a yard that was offered would be more money. There were approximately 900,000 yards, which would be \$45,000.

Q. 1270. And if you were entitled to only contract price for cobble pit excavation, how would it compare with that? A. With the cobble pit excavation it would compare approximately the same. It would be just approximately the same. That is, after figuring the overhaul.

Q. 1271. The difference between twenty-three cents and thirty-five cents would be twelve cents, wouldn't it? A. Yes, sir.

Q. 1272. And if you got twelve cents additional on all the yardage handled, what would that

263 amount to? A. About \$108,000 or \$110,000.

Q. 1273. Have you already stated what the approximate overhaul was on these cobbles? A. The overhaul would be approximately—it would amount to approximately five or six cents, on the yardage.

Q. 1274. Did you ever get any cobbles from the cobble borrow pits shown on the plans? A. Yes. It was opened up at the end. We did get some that we finished out with. We used the cobble borrow for earth borrow because it was on the downstream side. We used the cobble borrow for earth borrow to top out the dam.

Q. 1275. Do you know—and if you don't, say so—what the contracting officer's objection was, primarily, to classifying and paying for this material as cobble pit excavation instead of as earth excavation? Did he ever tell you? A. Read your question.

(Last question repeated by the reporter.)

· A. Well, it was because it was laheled as borrow.

Q. 1276. Did the haul have anything to do with it? A. Oh, yes. This here was more expensive than the cobble borrow. If I had taken it out of the cobble borrow it would have been less costly than those, because the haul wouldn't have been nearly as long.

Q. 1277. If this material from Pit 2 would have been classed as cobble borrow, would or would not the material have had to be paid for at the 264 contract price besides the added haul? A. Yes.

Mr. Sweeney: Pray Your Honor's judgment, that calls for a conclusion of the witness.

Commissioner Thompson: Yes, that does call for a conclusion.

## By Mr. Shields:

Q. 1278. Did you or not have to make any separation of earth materials from the other earth pit? That is, Borrow Pit 1? A. No, sir, we did not have to put that through any separating plant or do any separation excepting for throwing out an occasional rock.

Q. 1279. Did you or not expect earth borrow pit No. 2 to fall in the same category? A. Yes, sir.

Q. 1280. What was the difference between the materials from Pit 1 and Pit 2? A. Pit 1 was earth and was a gravelly material. On top generally there was a layer of red earth with no rock in it to speak, of. And it also had some gravelly material with no rock over five inches, except for an occasional rock.

But Borrow Pit 2 had a lot of rock in it and it had a lot of cobbles in it and it had to be put 265 through a separating plant or separated with rake dozers.

Q. 1281. Are you sufficiently familiar with what you found in Pit 2 to say what percentage of the materials excavated were actual cobbles? A. I tried to get that information from the engineers but I couldn't get it.

- Q. 1282. Did you form any opinion of your own knowledge? A. It ran around fifteen per cent of cobbles, fifteen to eighteen cents.
- Q. 1283. Were those cobbles all used in the cobble fill of the dam? A. Yes, sir.
- Q. 1284. The earth portion of Pit 2 that you said was taken out in 1938: Did that or not contain any excessive amount of cobbles? A. No, sir.
- Q. 1285. Are you now making any claim on account of cobbles in that part of Pit 2? A. No, sir. Mr. Shields: That is all.

#### Cross Examination

## By Mr. Sweeney:

XQ. 1286. Mr. Wunderlich, please, isn't it a fact that you obtained all of the cobble material required from Pit 2? Isn't that the sum and substance of the facts relating to this claim?

266 (Last question repeated by the reporter.)

- XQ. 1286. (Continued) That is, practically all of it, or enough from Pit 2? A. All the balance that we needed, we got it from Pit 2, yes.
- XQ. 1287. Now, if you had obtained the cobbles from the cobble pit indicated on the drawings, you would have had to strip it and build your hauling roads and incur the other expenses that would be usual in connection with that work, wouldn't you?

  A. If I got it from where?
- XQ. 1288. If you had got it from the regular cobble borrow pit. A. Yes, we would have had to strip.

XQ. 1289. And build your haul roads? A. We would also have got paid for stripping it.

XQ. 1290. But you would have had to build your haul roads, and so forth? A. Yes, but we would have had a much shorter haul. That was very material.

XQ. 1291. Now, isn't it a fact that in transporting the materials from Pit 2, that is, the cobbles, that you did not go beyond the free haul limit as

designated in the contract? A. In the cobble

267 borrow?

XQ. 1292. Yes. Isn't it a fact you did not go beyond the free haul limit? A. When?

XQ. 1293. When you were transporting the cobbles from Borrow Pit No. 2. A. Oh, No. We went way past the free haul limit on Borrow Pit 2, and we went outside of Borrow Pit 2, too.

XQ. 1294. When you did that, did you submit any protest in writing to the contracting officer? I mean, now, Mr. Harper, the contracting officer you have mentioned. A. Yes, in 1940, after the conference, we started protesting in writing.

XQ. 1295. You started protesting in writing then? A. Yes, sir.

XQ. 1296. And you protested to Mr. Harper? A. We protested to Mr. Burns and we sent a copy to Mr. Harper.

XQ. 1297. But you did communicate with Mr. Harper, the contracting officer, on this? A. Yes. We sent a copy of our letters. Mr. Harper instructed us to do that.

XQ. 1298. You were asked if you knew the reasons why the contracting officer said you would be paid cost plus for 1940; do you remember—and that was Mr. Harper, wasn't it? A. Well.

268 they figured that was the most equitable way of handling it.

XQ. 1299. No. I am speaking about the contracting officer now. You are now dealing with Harper. A. We met with Mr. Harper and Mr. Nalder. And when we were ready to submit the bill, then I discussed it with Mr. Nalder and Mr. Harper and Mr. See, and they asked me to submit the bill on a cost plus.

XQ. 1300. Isn't it a fact the substance of this whole claim is that after Mr. Harper, the contracting officer, had agreed to make this equitable adjustment of some \$44,000 plus, whatever that sum is, that you and the contracting officer couldn't get together on the issue as to what was a fair rental for the use of your equipment? A. I asked before I got the change order B3 that we agree on a rental rate and then later they refused to agree on any rental rates. I don't just recall whether it was the late fall of 1940 or the early part of 1941 when we agreed that this should be paid on a cost plus. I again asked that we agree on a rental rate. I tried very hard to get an agreement on a rental rate for this equipment, because we were in agreement on the hours that all the equipment worked.

The only place I could see there would be any confusion would be to agree on the rental rate. The

rates that we had previously agreed upon were not acceptable because they were hourly rates and for small jobs. Then Mr. See told me if I would

rental rates I would have no trouble. And I went back and used the AGC rental rates and also what the cost of our maintenance was, and I made it as reasonable as I possibly could, so that there would be no hold-up on this money. And when I submitted it they said it was submitted too high. And, using my maintenance costs, I now find out that I used the maintenance costs below what it actually was actually on the job, and my maintenance.

nance costs are below the prices that I submitted. XQ. 1301. Have you concluded your answer now? A. That's right.

XQ. 1302. Tell His Honor, please, if it isn't a fact that your equipment operated continuously while it was performing this work. A. No. It wasn't used continuously. We were down for rains and like you have on a normal job.

XQ. 1303. Except, of course, for the forces of nature, such as rains and other weather conditions, these seasonal conditions when you couldn't work, but while you were actually performing this excavation work your equipment operated continuously? A. Not on this one job. Not on this one Borrow Pit 2. We would have to move it into Borrow Pit 1 and out of Borrow Pit 2 over to Borrow Pit 1. We would have to move it, back and forth,

270 so as to complete these zones as uniformly as we could.

XQ. 1304. To obtain a proper gradation of materials; that is, the ABC of it, isn't it? A. Ves.

XQ. 1305. You operated on a two-shift basis? A. Yes, sir.

XQ. 1306. You have mentioned the AGC rates. A. Yes, sir, associated general contractors.

XQ. 1307. Do you know as a fact that the Bureau's rates are computed upon the basis of the AGC rates? A. No, they are not. They haven't taken into consideration many things that are in the AGC rates.

XQ. 1308. Will you mention what some of them are? A. Well, they took the monthly rate, the monthly day rate and the monthly night rate, and then divide it into hourly and allowed us on an hourly rate; not taking into consideration loss of time, like monthly rates cover.

Mr. Shields: I shall have to object to further examination along this line. I deliberately left off any direct examination on this because we have other witnesses who have made a special study of this matter and are better prepared to testify.

Mr. Sweeney: He did testify concerning rates.

Commissioner Thompson: Go ahead. He seems to be able to take pretty good care of himself on it.

Mr. Shields: Yes, but I did not have direct examination on it.

Mr. Sweeney: I thought there was sufficient.

A. (Continuing) I haven't got the exact figures, but they divided that by two-thirds, or something like that. I don't have the figures in front of me, and I have had another man figure this and my engineer is in a position to explain this. He has all the figures and the facts.

## By Mr. Sweeney:

XQ. 1309. Isn't it a fact that the Government merely was to compute the rates on the 8-hour shift basis and then divide it by the hourly rate—divide it by the hours? A. I haven't checked these figures. My engineer checked it and he will have to answer it for me.

XQ. 1310. All right. So that you can't tell the Court just the basic reasons for the difference between the contracting officer's calculation as dompared with your calculation of \$274,454.60? A. I can't, but our engineer and cost man can. He has all the figures.

Mr. Sweeney: I will not question Mr. Wunder-

lich further on that, Your Honor.

# By Mr. Sweeney:

XQ. 1311. Do we understand, please, when you opened up the cobble borrow pit toward the end of the job you did that only for the purpose of obtaining earth fill to finish off the embankment? A. Well, there was no other place we could go and get material. It was the most con-

venient material we could get. It was used for earth fill and the cobbles went into the cobble fill. But by that time the upstream side, Borrow Pit No. 2, had been covered with water and you couldn't excavate there any longer.

XQ. 1312. It was more convenient for you to obtain the material from that particular borrow pit area toward the end of the job? A. Well, that is, the—yes, that was—I wasn't there. I don't know.

Mr. Sweeney: That is all, Your Honor.

Mr. Shields: My friend has been referring to the AGC rental rates, and I think it probative at this time to offer into evidence as Plaintiff's Exhibit 17-B the official schedule of rates as issued by the Associated General Contractors.

Commissioner Thompson: All right, let it be filed.

(The document above referred to, marked Plaintiff's Exhibit 17-B, is filed in connection with this case.)

Mr. Sweeney: What year?

Mr. Shields: 1938, revised and enlarged 1938. I have it marked 17-B.

Also while on that subject and very appropriate to it, the Reclamation Bureau's own schedule of rates as revised in January, 1940, which I have marked 17-C.

Mr. Sweeney: No objection. We would have offered them both, Your Honor.

Commissioner Thompson: Let them both be received in evidence.

(The document above referred to, marked Plaintiff's Exhibit 17-C, is filed in connection with this case.)

## By Mr. Sweeney:

XQ. 1313. With respect to 1939, isn't it a fact you did not submit any supporting data to establish the claim for that year? A. What is that?

XQ. 1314. With respect to the cobble material you excavated in 1939, isn't it a fact you did not submit any supporting data for the claim for the work that you did in that year? A. We submitted the amount of yardage moved, which we got from the engineers. Those figures are obtained from the engineers.

XQ. 1315. You checked each of your monthly vouchers, didn't you? You were interested in seeing, of course, you were paid for the work that you did? A. Yes. And when we weren't paid, cobble borrow, why, we went to the engineer and asked

him why we weren't paid cobble borrow.

274 XQ. 1316. You were excavating from Pit 2, and it was paid under Item 14 instead of under Item 16, which related to the borrow pit?

A. Is this 14 the embankment?

XQ. 1317. The earth embankment. A. Is 14?

XQ. 1318. Twenty-three cents. A. We were paid under earth embankment instead of being paid under Item 16.

XQ. 1318. 16 is the cobble at thirty-five? A. Yes. XQ. 1319. Item 16 estimated only a comparatively small amount of cobble, didn't it, 50,000 cubic yards? A. Yes, sir.

XQ. 1320. Whereas you excavated a very large quantity of material from Borrow Pit No. 2, didn't you? A. Yes. But Borrow Pit No. 2 was much more expensive than the cobble borrow for us to move.

XQ. 1321. Why was it more expensive? You were already in it. A. It was a much longer haul.

XQ. 1322. Just for the longer haul? A. Yes. But it had to be processed just the same as cobble borrow. You had to put the material through a separating plant the same as you did cobble. And this No. 2 pit was three or four times as long a haul and therefore it was a lot more expensive.

XQ. 1323. A lot more expensive than the cobble borrow pit? A. Yes, than the cobble borrow pit.

Mr. Sweeney: That is all, Your Honor.

The Witness: There is one thing I want to explain in there: You said it called for 50,000 yards of cobble borrow. They did not get the amount of cobble out of the required exeavation as they had contemplated, and it took a lot more cobble in the cobble embankment than was originally contemplated.

By Mr. Sweeney:

XQ. 1324. All right. How do you know how much the defendant expected to get out of the re-

quired excavation—that is, how much cobble? A. They told me.

XQ. 1325. Who told you? A. The contracting officer.

XQ. 1326. Who was he? A. Mr. Burns.

XQ. 1327. When did he tell you that? As He told me when we started the job, and as the job went along he said, "We are running short of cobble borrow—running short of cobbles," not "cobble

borrow," for the cobble embankments.

276 XQ. 1328. Did you talk to anybody else representing the Government about it besides Mr. Burns? A. Yes.

XQ. 1329. With Jean Walton? A. No. My superintendent did. I did not discuss it with Walton.

Mr. Shields: Just a minute. Change order dated November 14, 1940, recites in its terms that because of failure to secure the expected yield, of cobbles from separated cobbles from the required excavations the excavation of separated materials from cobble borrow pit is increased and they specify the amount-which we never agreed to. That covers that.

Mr. Sweeney: The witness volunteered.

The Witness: I did not volunteer. You asked the question.

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E. H. Stewart, a witness produced on behalf of the plaintiff, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

#### Direct Examination

### By Mr. Shields:

- Q. 1. State your name, age, residence and occupation. A. B. H. Stewart, 42 years old. My occupation is superintendent of construction, and my residence is in Denver, Colorado.
- Q. 2. Whether or not you have any financial interest in the outcome of this litigation? A. I have not.
- Q. 3. Are you now employed by Martin Wunder-lich? A. No.
- Q. 4. What has been your construction experience? What had been your construction experience at the time you were employed by Mr. Wunderlich on the dam construction that is now in litigation? A. I started in construction work in 1922.
- Q. 5. Had you been continuously employed in that line of work from then until 1937? A. Except at times when I was in the north and in the winter-time we were unable to do that on account of freez-

ing weather.

Q. 6. Had you prior to this had charge of work comparative with the building of Val-

lecito dam? A. I had been on earth construction ever since 1922 and earthern structures.

- Q. 7. How long had you been employed by Wunderlich prior to 1933? A. I started working for him in the latter part of July, in 1937.
- Q. 8. When did you go on the work at Vallecito?

  A. About the middle of the month of May, in 1938.
- Q. 9. And were you on it until the completion of the job? A. Not until it was entirely completed, but it was essentially completed when I left.
- Q. 10. What assistant superintendents did you have on the job? Who were they? A. Floyd Helm and John New.
- A46 XQ. 170. It is also a fact, is it not, that not all of the materials that you obtained, say, from the borrow pit No. 2, for example, could be placed until you had processed it, that is, until you had screened out the larger rock? A. All of the cobble material from the No. 2 borrow pit was separated.
  - XQ. 171. Yes, that is a rather expensive proposition, isn't it, separating cobbles? A. Yes.

### CLAIM No. 17

COBBLESTONE EXCAVATION AND FILL

### **Direct Examination**

## By Mr. Shields:

Q. 597. We take up now Claim No. 17, Cobblestone Excavation and Fill. What required borrow pits were shown on the drawings and in what locations? A. There was one showing on the right of the river on the upstream.

Q. 598. What kind? A. Earth floor of the embankment. And there was one shown on the left bank of the river upstream from the dam.

Q. 599. What kind? A. It was shown on the drawings as earth.

Q. 600. And what else? A. There was one shown downstream from the dam on the left side of the river and it was shown as cobble rock.

Q. 601. Were those the only locations of borrow pits shown on the drawing? A. Yes.

Q. 602. And while we are about it, did you ever get any cobbles from the cobble pit, so-called cobble pit, below the dam? A. No.

Q. 603. What kind of a pit was the earth borrow pit shown on the right-hand side of the 522 river? A. Earth, clay.

Q. 604. Did you ever get any cobbles from that pit? A. No.

Q. 605. What kind of a pit was that described as an earth borrow material pit on the left bank of

the river, described on the drawings as an earthborrow pit? A. We got some earth out of there and then a lot of cobble also.

Q. 606. What is the fact as to whether you got all the cobbles required in cobble filling on the dam except the quantity you got by separating required excavation made at the dam? A. We got all of the cobbles out of the so-called No. 2 pit with the exception of what was obtained from the required excavation.

Q. 607. About when did you first discover that this so-called earth pit was in fact a cobble pit? A. After moving into it.

Q. 608. What did you do when you found the contracting officer was requiring you to excavate cobbles from a pit described as an earth pit and was paying you as earth excavation from it? A. There was a protest made.

Q 609. Did you ask written instructions?

Mr. Sweeney: Pray Your Honor's judg-523 ment, please; now, what did he do?

Commissioner Thompson: He has the right to ask him if he asked for instructions.

Mr. Sweeney: The question is leading.

Commissioner Thompson: I can't see that that is leading. I think he has a right to ask him that. Go ahead, Mr. Shields.

By Mr. Shields:

Q. 610. Whether or not at that time there was any promise made that the matter would be ad-

justed, that a different price than the earth excavation price would be paid for the cobble materials procured from Pit 2? A. Yes.

Mr. Sweeney: Pray His Honor's judgment.

Commissioner Thompson: I will sustain the objection to that. He can ask him if any promise was made and what it was.

## By Mr. Shields:

Q. 611. Yes, whether there was any promise made in 1939 when you were taking cobbles out of what is called an earth pit? A. Yes.

Mr. Sweeney: Pray Your Honor's judgment, we object. What was said &

Commissioner Thompson: I will let him tell what the promise was, if he made a promise. Go
524 ahead.

## By Mr. Shields:

- Q. 612. Was there a promise made? A. Yes, we were told we would be paid cobble for it.
  - Q. 613. Who said that? A. Mr. Burns said that.
- Q. 614. Do you know how many cobbles were taken out of Pit 2? What quantity of cobble material came out of Pit 2 during the 1939 operations? A. Approximately 80,000 yards.
  - Q. 615. Was any part of that paid for as cobble? A. No.
- Q. 616. If you know, whether all that material was cobble material? A. There was some earth taken from that pit in 1939.

Q: 617. But is there not the 89,000 you mentioned, the yardage of what you would call cobble materials, distinguished from the earth materials? A. That came out, yes.

Commissioner Thompson: You mean 80,000? Mr. Shields: Approximately 80,000. I think it is 79,000.

By Mr. Shields:

- Q. 618. Was or not separation of all that approximately 80,000 cubic yards required?

  525 A. Yes.
- Q. 619. Could any of it be placed on the dam without separation? A. No.
  - Q. 620. Was earth excavation required to be separated? A. No.
  - Q. 621. Is any claim being made on account of earth excavation from borrow pit 2? A. No.
  - Q. 622. Now coming into the 1940 operations: Was there any change in the situation? A. Well, we separated all of the material from that pit.
- Q. 623. Had you by that time discovered that you were not being paid for the cobble material excavated in 1939? A. Yes, that was discovered by one of the estimates.
- Q. 624. Did you or not further protest then against the continued excavation of cobbles from a so-called earth pit? A. Yes, we did.
- Q. 625. If you know whether the contractor threatened to quit operations unless some adjustment or agreement of adjustment could be had?

Mr. Sweeney: Pray Your Honor's judgment, what did the contractors do? He is the man to say what he did.

Commissioner Thompson: There might 526 have been a million things that the contractor did. But he has got to pin it down to something or other. Go ahead.

A. Yes, he did ..

# By Mr. Shields:

• Q. 626. And was some agreement had that there would be an adjustment? A. I understand that there was.

Q. 627. Has there ever been any adjustment, if you know? A. No, not that I know of.

Q. 628. So that as the matter stands, how was the contractor paid for excavation coming from Borrow Pit 2?

Mr. Sweeney: Pray Your Honor's judgment, that is objected to unless this witness knows of his own personal knowledge.

Commissioner Thompson: You can cross examine him all you want on that.

# By Mr. Shields:

Q. 629. You saw the monthly estimate, did you not? A. Yes, sir. It was paid as earth borrow.

Q. 630. What is the difference in price between earth borrow excavation and cobble borrow excavation? A. Twelve cents a yard.

Q. 631. One is twenty-three and the other thirty-five? A. Yes

Q. 632. Whether under your directions a careful count was kept of the cost of the 1940 operations in Borrow Pit No. 2? A. Yes.

Q. 633. And if the contractor is entitled to that cost, the records will show the amount there? A. Yes.

Q. 634. What is the difference and difficulty between excavating and placing on the embankment of earth materials and cobble materials? A. There is a great lot of difference. It is necessary to load earth borrow from the pits, haul it to the embankment and place it. But with cobble borrow it is necessary to separate it. It is harder loading. And then it is necessary to separate it by some manner of separating plant or rake dozers before placing it. It is a lot harder on equipment, tires.

Q. 635. What was the difference in length of haul between the embankment in Borrow Pit No. 2 and the embankment and what was shown on the drawings as cobble borrow pit? A. Many times four or five times longer from borrow pit 2 than it was to the cobble borrow, as shown on the drawing.

Q. 636. If cobbles had been obtained from the prescribed cobble borrow pit, would there have been any question of overhaul? A. No.

Q. 637. In other words, is the cobble bor-528 row pit not within 2500 feet of the place on the embankment where cobbles were required. A. Yes. Q. 638. And what is the distance from the embankment to the cobble borrow pit 2, approximately? A. Some of our haul ran over a mile.

Q. 639. What would you say is the average hauling distance between cobble borrow pit 2 and the place on the embankment where cobbles went? A. I would say it is over 5,000 feet.

By Commissioner Thompson:

Q. 640. That would be the average? A. Yes, sir.

# By Mr. Shields:

Q. 641. What is the fact as to whether the pit shown on the drawing as Pit 2 or as earth pit on the left bank of the river, which is Pit 2, constituted the final limits of borrow pit 2 from which cobbles were obtained? In other words, did you go beyond upstream and much farther away than the pit shown on the drawing? A. We did go outside of the area as shown on the drawing.

the dam than the pit shown on the drawing?

529 A. Yes.

Q. 643. Take the drawing and indicate by a pencil mark upstream from the so-called earth borrow pit on the left side of the river the approximate extent to which the borrow pit was extended and from which cobbles came. This is Plaintiff's Exhibit A, drawing marked 191-D-45.

The witness will now mark with a red pencil. Here is the earth embankment shown. I want him to show approximately where the earth embankment was finally extended to upstream from what is shown.

(Conference off the record.)

By Mr. Shields:

Q. 644. You have made a red line indicating something of the extension of the shown borrow pit? A. Yes.

Q. 645. And did all that extension add to the

length of haul to the dam? A. Yes.

Q. 646. I show you now a copy of a letter from Mr. Burns, as construction engineer, dated April 27, 1940, the same being sheet 25 of Plaintiff's Exhibit 17, and a preceding map or sketch marked sheet 24, and ask you if the sketch accompanied this letter and was Mr. Burns' instructions as to how this pit on the left side of the river was to be ex-

tended in 1940 (papers exhibited to wit-

530 ness). A. Yes.

Q. 647. And were these boundaries conformed to in subsequent excavation or were there variations in them? A. There was a variation.

Q. 648. Does that in general, though, indicate the prolongation upstream of the pit shown on the drawing? A. Yes.

Q. 649. And would this or not better indicate than the markings you have made on Drawing D-45 as to the extensions actually made? A. Yes.

(Conference.)

### By Mr. Shields:

as for cobble overhaul? A. No.

Q. 651. Were you ever allowed or paid anything for these cobbles except as earth excavation? A. No.

Mr. Shields: That is all.

### **Cross Examination**

## By Mr. Sweeney:

XQ. 652. Mr. Stewart, you testified on direct that the material in Borrow Pit 1 didn't have to be separated. Isn't it a fact that all of the material?

in Borrow Pit No. 2 had to be separated?

531 A. There was some taken out of there in 1939 that was earth and was not separated. It did not contain cobbles.

XQ. 653. The Specifications provide, please, Paragraph 55, only so far as pertinent, subparagraph (c), at Page 84:

"No stones having maximum dimensions of more than five inches shall be placed in the earth-fill portion of the embankment. Should stones of such size be found in otherwise approved earth-fill embankment materials, they shall be removed by the contractor either at the site of excavation or after transporting to the embankment, but prior to rolling and compacting the materials in the embankment. Such stones shall be placed in the cobble-fill portion of the embankment as approved by the contracting officer."

Now, just tell His Honor if it isn't a fact that the stones that were taken from Borrow Pit No. 2—that you used them for the cobble fill in Zone 3 downstream? A. That was the type of material. That was cobble.

XQ. 654. Yes. And it so happened that you found practically all of the cobble material that was necessary in Pit No. 2? A. All the cobbles that was necessary to finish the cobble section of the embankment other than what was required, obtained in the required excavation, came from that borrow pit.

XQ. 655. You have told us about the controversy which developed between the contractor and the

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Government, that cobbles were being removed from this pit and you felt you had to

carry them a long distance, a longer distance than if you obtained them from some other pit. Do you know as a fact if some equitable adjustment had been agreed upon by the contractor or suggested by the contracting officer totaling the amount that has been set out under Item 17 of the claim in the Petition? A. The contractor does not consider that to be equitable.

XQ. 656. But I mean the contracting officer did; suggest such a settlement? A. Yes.

XQ. 657. Isn't it a fact that the only controversy now between the parties is as to the fairness of the so-called rental rate? A. Yes, I understand that.

XQ. 658. That is something you are not testifying about? A. Yes.

XQ. 659. Tell His Honor please if it isn't a fact that the work relating to this item of the claim was performed under a continual seasonal program of two shifts per day and seven days per week operation. A. Yes, whenever climatic conditions permitted.

Mr. Sweeney: That is all. Thank you.

533 Redirect Examination

# By Mr. Shields:

RDQ. 660. Mr. Stewart, what would you say as to the comparative amount of breakdowns you would have in cobble pit as compared with breakdowns and upkeep in an earth pit? A. In the cobble excavation it would exceed greatly the amount that you would have in an earth borrow pit.

RDQ. 661. And whether any normal rate of depreciation on equipment and upkeep of equipment would apply when equipment was on this kind of work? A. It should not apply on that type of work.

#### Recross Examination

# By Mr. Sweeney:

RXQ. 662. In connection with this last question that Mr. Shields asked you about the comparative amount of the breakdown between excavating cobble from Pit 2 and the cobble borrow pit as indicated on the drawings, tell His Honor please if it isn't a fact that whatever cobbles you encountered in excavating the earth material in Borrow Pit No.

2—what would you have done with the cobbles you encounfered in Borrow Pit No. 2 in your excavating operations if you hadn't placed them in Zone 3, or Zone 4? A. Well, that is where we got all of encoubles for Zone 4 after the required excavation was completed.

RXQ. 663. Isn't it a fact you couldn't get
534 those cobbles unless you excavated whatever
material was with them; isn't that a fact?
You had to get the earth somewhere, didn't you?
Just answer that question. A. We got it out of the
cobbles excavated from that pit.

RXQ. 664. And whatever excavation or materials you could not get from required excavation you got it from the borrow pits, didn't you? A. Yes.

RXQ. 665. You got a lot of the material from this No. 2? A. Yes.

RXQ. 666. And when excavating this material you also encountered the cobbles? A. When we was excavating this cobble material we got the earth, yes.

RXQ. 667. Yes, of course. So you dug cobbles and earth, too, didn't you? Now, isn't it a fact that only a very small quantity of cobble was required, that is, as compared with earth excavation? A. There were a lot of cobbles required when we went into that pit.

RXQ. 668. Well, 50,000 from the cobble pit; isn't that a fact? And the remainder, 300,000, or whatever that quantity is, you were to obtain from

other sources? A. I couldn't say what quantity of cobble—

provide the schedule. A. I do know that there was a lot of cobble required at the time that the required excavation was completed and the Bureau of Reclamation had sections of the cobble area of the embankment—at that time—they were aware of the amount of cobbles that it would take to complete No. 4 section of the embankment.

RXQ. 670. Do you recall that Item 16 of the schedule pertaining to excavation and separation of excavation in borrow pits for cobble fill and transportation to the embankment contemplated only 50,000 yards of that material? A. Yes, but the required excavation didn't furnish as much cobble as was anticipated, either.

Mr. Sweeney: That is all.

# Redirect Examination

# By Mr. Shields:

RDQ. 671. In other words, the estimated quantity of the required cobble pit excavation was 50,000 yards? A. Yes.

RDQ. 672. But the actual excavation had to be correspondingly increased as the expected cobble from required excavation diminished? A. Yes.

576 . XQ. 889. Isn't it a fact that Borrow Pit

No. 2 on the other side of the river contained oversized cobbles and boulders which unless separated by screening would have to be removed by the rock rake dozer and hand-picking after placement? A. No. 2 pit was cobble, yes, and it was necessary to separate.

XQ. 890. But you did not have to separate this material in No. 1, did you? A. No.

XQ. 891. And isn't it a fact that the excavation in Borrow Pit 2 would have required long moves of the excavating equipment between the two pits? A. At that time, No. 2 borrow pit wasn't available to us.

XQ. 892. Wasn't it available at that time? A. No.

639 (Witness excused.)

John New, a witness produced on behalf of the plaintiff, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

#### Direct Examination

#### By Mr. Shields:

Q. 1. Will you please state your name, age, residence, and occupation, Mr. New? A. John New; La Monte, Missouri; age, 35; present occupation, farming.

- 640 Q. 2. What connection, if any, did you have with the work of building the Vallecito dam? A. Foreman, general foreman.
- Q. 3. When did you go on the work, and how long did you stay? A. I went on the job in July, 1938, and remained until January, 1941.
- Q. 4. You state you were general foreman. Did that mean something as assistant to Mr. Stewart, the superintendent? A. Yes, sir.
- Q. 5. Did that mean that you were in charge of all of the work, subject to Mr. Stewart's orders? A. All the work in the field.
- Q. 6. What experience had you had prior to then, prior to the time you went on this work, in construction work? A. I had been working on construction work since 1929.
- •Q. 7. What character of jobs had you been connected with? A. Mostly road construction.
  - Q. S. Earth moving? A. Yes, sir.
- Q. 9. And what would you say about the Vallecito dam contract? What was it, essentially? A. Earth moving.
- Q. 10. Were you experienced then in the operation of how to best operate the various types
  641 of earth-moving equipment that was placed on this job? A. Yes, sir.

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#### CLAIM No. 17

### COBBLESTONE EXCAVATION AND FILL

#### **Direct Examination**

# By Mr. Shields:

Q. 160. State, if you know, where all cobblestone materials required in the construction of the dam, except those obtained from the required excavation, were obtained. A. They were obtained from borrow pit, what was known as Borrow Pit No. 2.

Q. 161. And if you know, how that borrow pit was denominated or described on the contract drawings? A. It was described as an earth borrow

pit.

Q. 162. I want you to look at sheets 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, and sheets 79, 80, 81, 82, 83, 84, 85, 86, and 87, and I ask you if those pictures indicate the kind of materials procured from Bor-

672 on the contract drawings. A. These are pictures of material taken from Borrow Pit 2.

- Q. 163. Look at Sheet 73 and tell what the two top pictures show. A. It shows the shovel, where it is loading trucks of material from Borrow Pit No. 2.
- Q. 164. Look at the middle picture on Sheet 74.
  Would the answer be the same? A. Yes, sir.
- Q. 165. Look at the middle picture on Sheet 76. Would you say that is— A. That is where the truck is unloading at the separation plant.

Q. 166. What materials? A. No. 2 materials, materials from No. 2 borrow pit.

Q. 167. Take the two pictures on Sheet 78. What does that show? A. That shows pictures of the separation plant. The top picture shows where trucks are loading out from the plant. The lower picture shows cobblestones to which the two go from the floor pile, and were pushed out over a grizzly into the chute on the ground.

Q. 168. Were these later reloaded and placed in the dam? A. Yes, sir.

673 Q. 169. As an experienced earth mover, would you consider the requirement of movement of such material shown on these pictures movement of earth excavation? A. No, sir.

Q. 170. What would you call it? A. I would call it a rock excavation.

Q. 171. Whether or not it was necessary to separate all the excavation done in 1940 from Pit No. 2 A. It was.

Q. 172. You have already said that all the cobbles placed in the dam, except whatever quantity was required for the required excavation, came from the excavation of Pit No. 2, is that correct? A. Yes, sir.

Q. 173. You are familiar with the fact that the contract drawings located a cobble pit below the dam? A. Yes, sir.

Q. 174. What would have been the difference in hauling the cobbles from that pit and in hauling

from Pit No. 2? A. Hauling from Pit No. 2 was four or five times greater than it would have been from the pit that was designated on the plan.

Q. 174. The contract fixed a free haul limit of cobbles of 2500 feet. Was Pit No. 2 within that distance from the embankment? A. It was 674—reater than that distance.

Q. 175. What would you say was the average distance from Pit No. 2 to the dam where the embankment pits were placed? A. Four or five thousand feet.

Q. 176. Do you know or were you familiar at the time with the fact that this material was classed and paid for as earth excavation, all the materials coming from Pit No. 2? A. I do not know.

Q. 177. As an earth-moving man, would you say it was earth excavation? A. No, sir.

Mr. Shields: That is all.

#### **Cross Examination**

# By Mr. Sweeney:

XQ. 178. Tell His Honor, please, if you know, how much earth was taken out of Pit No. 2. A. I do not know.

XQ. 179. Well, can you give His Honor a rough estimate? Was it about one million or ten million? You were the assistant foreman on this job. You are telling about this item of claim. A. It wasn't my part of the work to check the quantities nor the estimates that came from any pits on the job, so I

do not know how much material was removed from this pit.

the things you have on direct as you have, if you don't know those simple facts? A. I do know that we did remove this material from this pit, and the material was processed and placed upon the embankment.

XQ. 181. Now, tell His Honor, please, what is the proportion of earth and cobble, if you know? A. The percentage of cobble run quite high; I would not know just exactly; twenty-five to thirty per cent.

XQ. 1823 The record will show not more than ten per cent cobbles, as compared with the other? What would you say? A. In my opinion, it would be low.

XQ. 183. You just told His Honor just a moment ago that you did not keep a check of those things, so, as a matter of fact, you haven't any basis upon which you can even make an estimate? A. I didn't keep a check.

XQ. 183. You didn't keep a record? A. I didn't keep a record, but from observation I could tell pretty near what percent it would run by checking the screened material, going to the plant and checking the material.

XQ. 184. But it is a fact that only a small amount of material from the plant was cobble? A. 676 There was quite a large amount of cobble.

XQ. 185. Could you suggest about how much?

A. I said twenty to twenty-five per cent.

XQ. 186. Twenty-to twenty-five per cent. That is your best estimate? A. Similar to that.

### Redirect Examination

### By Mr. Shields:

RDQ. 187. When you are talking about the percentage of cobbles, you mean cobbles, not cobble material? A. I mean cobbles, yes.

RDQ. 188. What would you say as to whether all the excavation was cobble or earth material? I mean, the percent of cobble that was hauled from this—that is, the actual cobbles extracted from the excavation, would amount to something of the percentage you stated? A. Yes, sir.

Mr. Shields: That is all.

Mr. Sweeney: No further questions, if Your Honor please.

710 C. V. Howard, a witness produced on behalf of the plaintiff, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

#### Direct Examination

# By Mr. Ruddiman:

Q. 1. Will you state your name, your age, your residence and your occupation? A. C. V. Howard; 38; St. Louis, Missouri; railroad.

- Q. 2. Are you presently employed by the plaintiff in this case? A. No, sir.
- Q. 3. Were you employed on the Vallecito dam project? A. Yes, sir, I was.
- Q. 4. During what period were you there? A. From April, 1939, to October, 1941.
- Q. 5. And what was your position there during that time? A. Timekeeper and cost man.
- Q. 6. What did your duties involve? A. Keeping the record of the time of the labor and equipment used on the job, and seeing that they were charged to the various items of the contract.
- Q. 7. Will your describe a time book? A. It is a small book with the spaces—a number of sheets in

it, and spaces for the names of all the em-

- 711 ployees, the days of the week, and the hours worked each day, total hours worked and the rate, amount.
- Q. 8. And at the top of the time book do you show the particular operation to which the hours are charged? A. In addition to the first sheet, there are also additional sheets in the time book on which the hours on each operation are charged.
- Q. 9. Would you have a separate heading for each contract item? A. Yes, sir.
- Q. 10. And from time to time would Mr. Stewart order you to keep separate costs on other items?

  A. Yes, he did.
- Q. 11. And were the hours of equipment kept in separate books? A. That was a separate time book,

the same as the labor time book, except that equipment was listed in that time book instead of labor.

Q. 12. The time would be entered each day, is that correct? A. Yes, sir, each shift.

Q. 13. Who would fill in these time books? A. The foreman on the job, and sometimes myself.

Q. 14. Well, would you travel around the job to see the time was being charged to the correct opera-

tion? A. Yes, I checked the men and the

each shift. I checked for the foreman to see they were charging the men and the equipment to the right operation.

Q. 15. I show you Plaintiff's Exhibit 2-A and ask you do you know when that was typed up? A. It was typed up on July 12, 1939.

Q. 16. At that time did the pencil figures appear on that sheet? A. Not at the time it was typed.

Q. 17. How did they happen to be added? A. This sheet was equipment Mr. Wunderlich had me have typed—

Q. 18. Did you see it being typed? A. Yes, sir, and Mr. Wunderlich and I took this list of equipment and went to the Bureau of Reclamation office to see Mr. Burns, and Mr. Burns and Mr. Wunderlich went over the rates, the rental to be charged on the various pieces of equipment.

Q. 19. For what purpose? A. For the extra work we had been doing there, doing on the job. As they

agreed upon a rental rate, I entered the rate on the list of equipment.

Q. 20. At the time that list was typed up, was there just an original typed? A. No, there was three copies.

Q: 21. The original - A. Original and two.

Q. 22. All typed at the same time? A. Yes.

Q. 23. And you filled in the pencil rates that were agreed upon during this conference with Mr. Burns, is that right, on the original and all of the copies? A. The original and both copies.

Q. 24. And did you give one of the copies to Mr.

Burns? A. Yes, sir.

Q. 25. I notice that opposite certain of the type-written pieces of equipment no rates are listed, and there is a notation, "Not taken up with Burns. Per M.W." Did that appear on the copy given to Mr. Burns? A. No, sir.

Q. 26. That was added after the conference? A. The notation was added afterwards.

Q. 27. And from there down on the sheet the notation "Notation on original. Be sure and save this sheet for M.W. 12-11-39. C.V.H." Did that notation appear on the copy given to Mr. Burns? A. No, that was put on there 12-11-39.

Q. 28. And from there on down-

By Commssioner Thompson:

Q. 29. Wait a minute. Who put it on there? A. I put this notation on the original.

# 714 By Mr. Ruddiman:

Q. 30. Who put this on there? A. This was copied on by James Handy.

Q. 31. Did I understand this was copied at the time along with the original? A. Yes, sir.

Q. 32. And have you looked for the original? A. Yes, sir, I have looked for it but, I haven't been able to find it.

Q. 33. Further on down I see the following notation, "Original sent to Denver with B.H.S. for 1-25-40 conference." Did that appear on the copy given to Mr. Burns? A. No, sir.

Q. 34. It was added later? A. That was added later at the time it was taken up for this conference.

Q. 35. On the second line from the top there is the insertion in pencil, "Charles A. Burns for Bureau of Reclamation," and there is the further insertion in pencil "12" after the typewritten word "July." Were those put on the copy given to Mr. Burns? A. Yes, they were.

Q. 36. You have testified you were present at the conference between Mr. Burns and Mr. Wunderlich on July 12. A. That is right.

715 Q. 37. And is it your understanding that these rates were to apply to all extra work?

A. All the extra work—

Mr. Sweeney: Pray Your Honor's judgment, we submit it is immaterial what understanding, what

this witness might understand. He was there simply recording something that was taking place.

Commissioner Thompson: Not what his understanding was—what was said.

Mr. Sweeney: Thank you.

A. They had agreed on these rates to be used on the extra work that they were performing on the contract.

# By Mr. Ruddiman:

Q. 38. Did Mr. Burns say that? A. Yes, sir.

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# CLAIM No. 17

### COBBLESTONE EXCAVATION AND FILL

#### Direct Examination

# By Mr. Ruddiman:

Q. 331. Did Mr. Stewart instruct you to keep separate costs on excavation in Borrow Pit No. 2 during the year 1940? A. Yes, he did.

Q. 332. I will show you Plaintiff's Exhibit 17-A, which is headed Claim for Adjustment Under Order for Changes No. 3, and I will ask you if you prepared the statement which follows. A. Yes, sir, I did.

Q. 333. I notice here a figure of \$53,649.78 for the Cost of Labor. Where did you obtain that figure? A. That is from the time books and labor on the job.

764 Q. 334. And the Compensation Insurance,

Public Liability Insurance and Social Security Taxes show a total of \$5,368.66. Where did you obtain that figure? A. That is insurance and taxes paid on that labor.

Q 335 Next appears a Summary of the Hours for various pieces of equipment. Where did you obtain the figures for those hours? A. That was from the equipment and time books kept on the job.

Q. 336. I notice also that there are figures for the rates on the various pieces of equipment. Will you tell me where you obtained those figures? A. From Mr. Leonard.

Q. 337. I will show you a statement headed "Claim for Adjustment Under Order for Changes No. 3," which appears on Plaintiff's Exhibit 17, beginning at page 86. Did you prepare that statement? A. Yes, sir.

Q. 338. And from what sources? A. From the time books and records on the job.

Mr. Sweeney: From what?

Commissioner Thompson: Speak up.

The Witness: From the time books and records on the job.

Q. 339. Was this prepared before or after the statement you have just testified about? A.

765 After the other statement, the previous statement.

Q. 340. And was submitted to the Bureau? A. Yes, it was.

Q. 341. I notice that the statement appearing at page 6 of Plaintiff's Exhibit 17 has a figure of \$61,-193.72 for labor. I note that this is a larger figure than the figure for labor in the previous statement. Can you explain that? A. Yes. This later figure, the difference, is cost of moving, setting up and remodeling separation plant, which was included in the capital value of the separation plant in the previous statement.

Q. 342. The statement in Plaintiff's Exhibit 17-

A? A. That's right.

Q. 343. And in this statement, do I understand that the charge for labor in connection with the dismantling and setting up of the separation plant in Borrow Pit No. 2 was charged directly to cobble borrow cost? A. In this statement it is charged directly to the cobble borrow.

Q. 344. By "this statement," you mean the state-

ment in Exhibit 17? A. That is correct.

Q: 345. I notice that in the statement in Plaintiff's Exhibit 17, the figure for Compensation Insurance, Public Liability Insurance and Social Se-

curity Taxes is \$6,112.63, and that this is somewhat larger than that in the statement in Plaintiff's Exhibit 17-A. Will you explain that? A. That is the increase in the insurance and taxes on the labor on the remodeling the separation plant.

Q. 346. In the statement in Plaintiff's Exhibit 17, I notice that the hours listed for the various pieces of equipment are somewhat larger than the

hours listed for the equipment in the statement in Plaintiff's Exhibit 17-A. Can you explain that? A. That is the equipment hours that were used in the remodeling of the separation plant, moving, setting up and remodeling.

Q. 347. Can you tell me where you obtained the hourly rates for equipment shown in the statement, on page 86 of Plaintiff's Exhibit 17? A. Those were given me by Mr. Leonard.

Mr. Sweeney: Pardon me, I didn't hear that last answer.

Commissioner Thompson: "Given him by Mr. Leonard."

Mr. Ruddiman: That is all on Item 17.

## Cross Examination

# By Mr. Sweeney:

XQ. 348. Now, referring to Plaintiff's Exhibit 17, Mr. Howard, did you prepare this statement? A. Yes, sir.

XQ. 349. Where did you prepare it? A. On the job.

767 XQ. 350. And when? A. Prior to the date of this.

XQ. 351. That is, you actually prepared this statement? A. Yes, sir.

XQ. 352. We understood you to tell His Honor at the outset of your cross examination that you had not studied bookkeeping. A. I never studied it in school.

XQ. 353. You never studied it in school? A. That's right.

XQ. 354. And you are not a cost accountant? A. No, sir, not a graduate accountant.

XQ. 355 What railroad was it you worked for?

A. Terminal.

XQ. 356. Terminal Railroad? A. Yes.

XQ. 357. A steam railroad? A. Steam and Diesel.

XQ. 358. Where was it located? A. In St. Louis.

XQ. 359. How long had you been employed by that company? A. For about five months.

XQ. 360. Five months? A. That is correct.

XQ. 361. And you were employed as a switchman? A. That's right. -

768 XQ. 362. What did you do before that?

A. I was a brakeman on the Missouri Pacific.

XQ. 363. How long were you a brakeman? A. For a year.

XQ. 364. More than a year? A. Approximately a year.

XQ. 365. Before that what did you do? A. I. worked for Martin Wunderlich.

XQ. 366. Before that time? A. Yes.

XQ. 367. And performed the duties that you have heretofore testified about, including keeping cost records on the job? A. That's right.

XQ. 368. And you went out on the job to collect various data relating to the time that the men had put on the job and the equipment that was operated? A. That's right.

XQ. 369. That is correct? A. Yes.

XQ. 370. You actually prepared this statement, Plaintiff's Exhibit 17? A. Yes, sir.

XQ. 371. Now, referring to Exhibit 17-A that was shown to you, did you prepare that statement, too? A. Yes, sir.

769 XQ. 372. The first item under the heading Equipment Rendered is an RD 8 caterpillar tractor, and the rate is \$7.35. That is the hourly rate? A. That is correct.

XQ. 373. What did you do in calculating that rate? Did you do anything at all? Or, just in a few words, how did you arrive at that figure? A. Those were the rates given me by Mr. Leonard.

XQ. 374. Then you don't know anything about it, how they were worked out? A. Not how they were arrived at.

XQ. 375. Do you know anything about the age of the equipment? A. The age?

. XQ 376. Yes, the age of this particular item. A. There were several tractors included in that item.

XQ. 377. This first one, RD 8 caterpillar— A. There are six or seven tractors.

Commissioner Thompson: Do you know how old they are?

The Witness: I don't know how old each one of them is, no.

# By Mr. Ruddiman:

XQ. 378. Do you know the ages of any of this equipment? A. Not definitely.

770 XQ. 379. You don't know what depreciation rates or anything were figured in agriving at this hourly rate? You yourself don't know. You took them from Mr. Leonard? A. I took these rates from Mr. Leonard.

XQ. 380. That is something he will have to tell us about? A. (No response.)

XQ. 381. Do you know that the Rendered Rates as calculated by the Bureau are based upon the Associated General Contractors of America? That these are based upon the 1938 report as revised by the Associated Contractors of America? Do you know that the Bureau rates are based upon the AJC rates of 1938 as revised? A. I don't know that.

XQ. 382. You don't know that? A. No. It says they are, but I don't know.

XQ. 383. You don't know anything about that?

XQ. 384. Now, you mentioned the cost of figures that you considered in connection with setting up the separation plant, Borrow Pit No. 2, and that it was charged directly to the cobble borrow. Do you recollect when the plant was set up? A. In the spring of 1940.

XQ. 385. That was in the spring of 1940? Λ.

That's right.

771 XQ. 386. You were on the job all the time?
A. Yes, sir.

XQ. 387. You saw this plant operating? A. Yes, sir.

XQ. 388. Tell His Honor please if it is not a fact that it did not operate efficiently and properly and had to be practically remodeled and rebuilt by the contractor in 1940. A. We moved it over there and remodeled it in the spring of 1940.

XQ. 389. You did that in 1940? A. That's right.

XQ. 390. You don't know anything about any litigation or anything alout that separation plant, Mr. Howard? A. I wasn't involved in it, no.

Mr. Sweeney: That is all, Your Honor.

# Redirect Examination

# By Mr. Ruddiman:

RDQ. 391. I forgot to ask you on direct about the statement,—

Commissioner Thompson: Are you going back to

Item 17 now?

Mr. Ruddiman: Yes, Item 17.

By Mr. Ruddiman:

RDQ. 392.—appearing in Plaintiff's Exhibit 17-A which includes a figure of \$94.59 for dynamite and supplies. Will you tell me where you ob-

and supplies that we used out on the job to blast some of the material on that pit. The figures were obtained from the amount paid for that material.

RDQ. 393. It is shown in your books and records?

A. Shown there, yes.

RDQ. 394. And that same figure, \$94.59, for dynamite and supplies, appears in the statement beginning at page 86 of Plaintiff's Exhibit 17—A. That is for the same material.

RDQ. 395. Just a minute. Was that figure obtained from the same source? A. Yes, sir.

RDQ. 396. In the statement beginning at page 86 of Plaintiff's Exhibit 17, there appears a figure of \$3,836.10 for the material for remodeling and setting up the plant—rate on material. Can you tell me where you obtained that figure? A. That is the material used in remodeling and setting up the plant, as shown by the cost records on the job.

RDQ. 397. Does the statement appearing in Plaintiff's Exhibit 17-A correctly list the cost for labor, as reflected in Plaintiff's records? A. Yes, sir, it does.

RDQ. 398. And for Insurance and Social Security Taxes? A. Yes, sir, it does.

773 RDQ. 399. And does it correctly list the Hours for Equipment Rental as shown by Plaintiff's records? A. Yes, it does.

RDQ. 400. And does it correctly show the cost of Dynamite and Supplies, as shown by plaintiff's records? A. Yes, sir.

Mr. Ruddiman: That is all.

Mr. Sweeney: No cross examination.

809 Mr. Ruddiman: Your Honor, I over looked introducing an exhibit in connection with Claim No. 17, and with your permission I will return to Claim 17.

Commissioner Thompson: Very well.

Redirect Examination

# By Mr. Ruddiman:

RDQ. 426. Have you prepared a statement showing the actual cost of maintenance per hour for the various pieces of equipment used on this project during the period April to November, 1940, inclusive? A. Yes, sir.

RDQ. 427. I will show you a statement and ask you whether this is the statement you prepared. A. Yes, it is.

RDQ. 428. I notice at the top, running from left to right, you have listed various items or 810 classes of equipment. I will ask you whether you have shown the hourly rate for maintenance with respect to each item of equipment? A. Yes, sir.

RDQ. 429. I show you the item headed Lima 3½-yard dragline, and ask you to explain to the Court the figures which follow. A. The first figure of \$1,-843.42 is the labor for the period from April to November, 1940, inclusive.

RDQ. 430. From April to November, 1940? A. Yes, sir.

### By Mr. Shields:

RDQ. 431. Hours of labor? A. Not the hours of labor, no. That is the dollars, \$1,843.42 is the labor used in maintenance and repairs of this piece of equipment during that period.

# By Mr. Ruddiman:

RDQ. 432. Is that labor at the shop? A. Shop labor, that is correct.

RDQ. 433. Is that labor which was charged directly to the Lima three and a half yard dragline?

A. Yes, sir, it is.

RDQ. 434. Are your shop records kept in such a way that labor is charged directly to a particular piece of equipment? A. Yes, they are. All labor

is charged out to the piece of equipment that 811 they work on.

RDQ. 435. Will you explain the figures which follow? A. The figure of \$104.83 is the compensation insurance on the labor for that period.

### By Commissioner Thompson:

RDQ. 436. On that same dragline? A. The same dragline. And the \$18.43 is the social security insurance on the labor on the dragline; \$55.30 is the unemployment compensation insurance on the

labor on the dragline; the \$2.69 is the public liability insurance on that labor on that dragline.

### By Mr. Ruddiman:

RDQ. 437. And what about the figure \$2,024.67? A. That is the total on the labor and the insurance and taxes on that dragline for that period.

RDQ. 438. The labor is charged directly to that piece of equipment? A. Charged directly to that piece of equipment.

# By Commissioner Thompson:

RDQ. 439. Well, now, is that from April 1st? You just said April to November. A. That is during the entire month of April.

RDQ, 440. Inclusive? A. Inclusive.

### By Mr. Ruddiman:

RDQ. 441. I notice the next figure, .049 per cent.
What does that represent? A. That is the
percentage used to distribute the shop over-

head labor to that piece of equipment, distribute its share of the shop overhead.

RDQ. 442. How is that distributed? A. By the percentage of the total shop labor used—by using the percentage, of which this \$2,024.67 is of the total shop labor.

RDQ. 443. Let me ask you this: Do I understand you to mean that this percentage of .049 is arrived at by dividing that figure \$2,024.67 by the total labor charged directly to all pieces of equipment? A. That is correct. The total property labor.

RDQ. 444. And what does the next figure, \$770.11 represent? A. That is .049 per cent of the overhead labor that was charged to this piece of equipment.

RDQ. 445. What do you mean by the overhead labor? A. That is the general labor in the shop, which is on all pieces of equipment that could not be charged directly to any one specific piece.

RDQ. 446. And what does the next figure, \$2,794.78, represent? A. That is the total of the labor charged direct to that piece of equipment, plus the overhead labor.

RDQ. 447. Next I see the figure 2,876. What does that represent? A. That is the equip813 ment hours that this piece of equipment worked on the job during that period on all phases of work.

RDQ. 448. On all operations and not just including the cobble borrow? A. That is correct. Total hours of equipment worked on all operations during that period.

RDQ. 449. The next figure is .97. What does that represent? A. That is the rate per hour for maintenance labor, arrived at by dividing the total labor by the equipment hours on the piece of equipment.

RDQ. 450. By "total labor," you mean the figure \$2,794.78? A. That is correct.

RDQ. 451. Dividing that by the hours, 2,876? A. That is correct.

RDQ. 452. Reading down, the next figure is \$8,-195.41. What does that represent? A. That is the cost of the repair parts for that period. They were chargeable directly to the Lima dragline.

RDQ. 453. What does the next figure, \$464.17 represent? A. That is the freight on those parts referred to above.

RDQ. 454. And the next figure is \$8,659.58. What does that represent? A. That is the total of the repair parts and the freight.

RDQ. 455. The next figure is \$778.27. Where did you obtain this figure? A. That is the general supplies that were used in the maintenance of the equipment. General supplies, such as acetylene, oxygen, bolts and nuts, that could not be charged directly to any piece of equipment, and was charged out to each item of equipment in accordance with the percentage used to distribute the overhead labor.

RDQ. 456. In accordance with the percentage .049 per cent? A. That is correct.

RDQ. 457. And the next figure, \$9,437.85. What does that represent? A. That is the total cost of the repair parts, supplies and freight.

RDQ. 458. And the next figure, \$3.28. Tell us what that represents. A. That is the rate per hour for repair parts and supplies on this piece of equipment.

RDQ. 459. How do you arrive at that figure? A. By using the total number of hours that that piece of equipment worked during that period.

RDQ. 460. In other words, you divide the figure \$9,437.85 by 2,876 hours, previously referred to?

A. That is correct.

815 RDQ. 461. And what does the last figure and column represent, \$4.25? A. That is the grand total rate for labor, repair parts and supplies for equipment maintenance, maintenance labor, repair parts and supplies.

(Last question and answer read.)

RDQ. 462. Do I understand that the figure \$4.25 represents the total cost of labor for maintenance and the total cost of parts, freight on parts, and supplies used during the period April to November, 1940, inclusive, expressed in an hourly rate? A. That is correct, on that piece of equipment.

By Commissioner Thompson:

RDQ. 463. That is just an addition? A. An addition of the rate per hour for labor, parts and supplies, or per hour for—

By Mr. Shields:

RDQ. 464. In other words, you just added 97 cents and \$3.28 and you get \$4.25? A. That is correst.

By Mr. Ruddiman:

RDQ. 465. Are the other pieces of equipment listed in this statement on the same basis? A. Yes, sir, they are.

816 RDQ. 466. And do the rates at which you arrived reflect the actual cost for labor and

maintenance, labor and parts for maintenance, as shown by plaintiff's cost records? A. Yes, sir.

Mr. Ruddiman: I offer this as Plaintiff's Exhibit

Mr. Sweeney: May I examine, if Your Honor please?

Commissioner Thompson: Do you want to reserve your right to object to the introduction later on?

Mr. Sweeney: Yes, Your Honor, please.

Mr. Shields: My associate has to visit the doctor a quarter of twelve.

Commissioner Thompson: We will adjourn until 1;30, then.

(Whereupon, at the hour of 11:30 o'clock a.m., an adjournment was taken until 1:30 o'clock p. m. of the same day.)

#### AFTERNOON SESSION

# 1:40 o'clock

Mr. Shields: Let the record show that plaintiff has tendered to Government counsel a statement of jobs of work had by this plaintiff prior to the taking of this contract, for such use as he may wish to make of it. We will not offer it in evidence.

Mr. Sweeney: The defendant has no desire, then, to use the document.

Commissioner Thompson: Very well.

Mr. Sweeney: Just before we start, if Your Honor please, in connection with the memoran-

817 dum that we were discussing, which was Plaintiff's Exhibit 5-B, pages 5 to 10, may the record show that the memorandum is in evidence as part of the plaintiff's appeal, Plaintiff's Exhibit D, pages 14 to 18, inclusive?

Commissioner Thompson: All right.

Mr. Ruddiman: May I ask one more question? Commissioner Thompson: Surely.

C. V. Howard, resumed the stand for further

Redirect Examination

# By Mr. Ruddiman:

RDQ. 467. In connection with what has been offered as Plaintiff's Exhibit 17-D, I notice that under the heading Euclid 15-yard bottom dump truck, no figure is given. Can you explain that? A. Because the repairs on the 12-yard rear dump and the 15-yard bottom dump were combined and kept together as one figure.

RDQ. 468. Is that because many of the parts are interchangeable? A. Yes, sir, and very similar.

Mr. Ruddiman: That is all.

Recross Examination

By Mr. Sweeney:

RXQ. 469. Mr. Howard, please, referring to Plaintiff's Exhibit 17-D, tell His Honor, did 818 you prepare this compilation or summary statement of the maintenance expense? A. Yes, sir.

RXQ. 470. That is, you prepared it in the form that it has been offered in evidence? A. Yes, sir.

RXQ. 471. Where did you prepare it? A. Here in Denver.

RXQ. 472. In Denver? A. Yes.

RXQ. 473. When? A. Just a few days ago.

RXQ. 474. Just a few days ago you prepared it?

A. That is correct.

RXQ. 475. And in preparing it what did you use? That is, what did you use in its preparation? A. The shop cost records.

RXQ. 476. Anything else? A. All of these figures are included in the shop cost records. That is all that was necessary.

RXQ. 477. These records are now in Denver, are they? A. Yes, sir.

RXQ. 478. The shop cost records ? A. Yes.

RXQ. 479. What Address? A. I beg pardon? RXQ. 480. What address in Denver?

Mr. Shields: In my hotel room. And they will be stored elsewhere. They will be sent to Jefferson City.

By Mr. Ruddimane

RXQ. 481. Tell His Honor, please, did you prepare this Exhibit 17-D in the Cosmopolitan Hotel? A. Yes, sir.

RXQ. 482. In Room 722 and 723? A. 724, I be-

Commissioner Thompson: Has this paper been offered in evidence?

Mr. Ruddiman: The offer has been made.

Mr. Sweeney: The offer has been made, and we are crossing before it is ruled on. You have made the offer, as I undrstand.

Mr. Ruddiman: Yes, I have.

Commissioner Thompson: Are you through cross examining?

Mr. Sweeney: No. I am just beginning.

By Mr. Sweeney:

RXQ.483. None of this data has herefore been furnished? A. Not that I know of.

RXQ. 484. The first percentage factor, .049 per cent, under the Lima three and a half yard dragline, percentage used to distribute shop overhead labor,

where did you get that percentage factor,

820 please? How did you calculate that? A. That was by dividing the total labor used directly in maintaining the dragline by the total labor used in maintaining all of this equipment.

RXQ. 485. The grand total rate for labor, repair parts and supplies for maintenance and equipment is 4.25. Is that on an hourly basis or daily basis or what? A A daily basis.

RXQ. 486. And this item of 4.25, is it added to the rental rate or is this computed as a part of the rental rate as applicable to the Lima three and a half yard dragline? A. 4.25 is the rate of maintenance for that piece of equipment.

RXQ. 487. And that would be in addition to the rental rate applicable to that piece of equipment? A. The rental rate you are speaking about, if that includes repairs, it would not be added to it. If it does not, it would be added to it.

RXQ. 488. That is what we want to know. Is there something included in the amounts you have claimed for the rental equipment? A. This was just figured up in the last few days.

RXQ. 489. Of course, it is applicable only to the maintenance, the cost of maintaining and repair-

ing, is that what it is A. Yes, the cost of maintaining these pieces of equipment.

RXQ. 490. Would the purpose of this be to prolong the life of this equipment? Would that be the purpose? A. No, sire This maintenance is just on any breakage or any minor repairs.

RXQ. 491. That is what I want to develop, if it is on some minor repairs and you are maintaining it in good working order. A. It is just breakage, field repairs made on the job while we were working.

RXQ. 492. Would it include any major replacement parts? A. No, that wouldn't include any major replacement parts.

RXQ. 493. It wouldn't include any major parts?

A. No; sir.

RXQ. 494. This includes only the repairs that were made on the job from your own shop on the job? A. Field repairs made on the job.

RXQ. 495. Just the field repairs, that is the better expression. A. Yes.

RXQ. 496. Did anyone assist you to prepare this? A. This statement here?

RXQ. 497. Yes. A. No.

RXQ. 498. Where was it typed? A. By 822 Mrs. Olson, here in Denver.

RXQ. 499. Where? I asked where. A. In the Mack Building.

RXQ. 500. In the Mack Building? A. Yes.

RXQ. 501. So this was not prepared, then, in its entirety, in the Cosmopolitan Hotel? You had to use a very large tabulating machine to prepare this. A. No. It was typed in two sections.

RXQ. 502. In preparing these cost rates, did you use any data compiled by the Associated General Contractors of America? A. This is actual costs; nothing else.

RXQ 503. This is nothing but actual costs? A. That is correct.

RXQ. 504. And it is just a summary of what your job cost records show, is that true? A. That is correct.

Mr. Sweeney: Your Honor please, we understand now that this is just a summary of the job cost records that this witness has compiled, and for that purpose I don't believe it has any objection to it, that is for the limited purpose that this reflects. But the job cost records show it is subject to check and verification by the defendant's auditors.

823 Commissioner Thompson: All right. It may be filed.

(The document above referred to, marked Plaintiff's Exhibit 17-D, is filed in connection with this case.)

Mr. Ruddiman: Any further questioning?
Mr. Sweeney: That is all.

836 George Leonard, a witness produced on behalf of the plaintiff, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

# Direct Examination

### By Mr. Ruddiman:

Q. 1. State your name, age, residence and occupation. A. George Leonard, 40, Denver, General Superintendent for Contractor.

Me Sweeney: What was the age, please? The Witness: Forty.

#### By Mr. Ruddiman:

- Q. 2. Are you general superintendent for the plaintiff in this district? A. I am.
- Q. 3. How long have you been acting in that capacity? A. I started with them approximately seventeen years ago, and while I was not classi-
- 837 fied as general superintendent at the time,

  I was more or less an assistant to Martin

  Wunderlich at all times.
- Q. 4. And you have been with him ever since? A. I have.
- Q. 5. Did you take any part in preparing a bid for the Vallecito dam project? A. I did.
- Q. 6. And in this connection did you study the specifications and drawings? A. I did.
  - Q. 7. Did you visit the site? A. I did.

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### ITEM 17 OF CLAIM

Direct Examination (Continued)

### By Mr. Ruddiman:

Q. 107. Have you ever had any experience in using the Associated General Contractors' equipment ownership expense schedule? A. I have.

Mr. Ruddiman: This schedule, incidentally, is. Plaintiff's Exhibit 17-B.

Commissioner Thompson: Let me see that a minute. Go ahead.

#### ·By Mr. Ruddiman:

Q. 108. I notice that beginning at page 4 of this schedule, which is Plaintiff's Exhibit 17-B, there are set up certain rates for various pieces of equipment. Can you tell me whether those rates are monthly rates, daily rates, or hourly rates? A. The last column on the right-hand side of each sheet shows the expenses per working month, expressed in dollars. That is a monthly rate reflecting the ownership expense.

Q. 109. Do these sheets, beginning at page 4 and following, show any daily or hourly rate? A. Yes, sir.

Q. 110. Does there appear anywhere in this exhibit anything which mentions a daily or hourly rate? A. Yes, there does.

Q. 111. Will you quote then from it? A. On page 2 in the last paragraph it says, "Monthly rate is not subject to deductions for Sundays or holidays and should be charged for full calendar period elapsing between shipments to and from the job. Since the idle time of equipment is taken care of by a factor in the monthly expense, no such factor should be used in computing a daily rate. The daily rate is derived simply by dividing the monthly rate by thirty. When a machin is charged to a job on a daily basis, the rate should be charged for each calendar day without deductions for Sundays, holi-

days or other idle time during the period it is assigned to the job. The period to be charged is the full time elapsing between shipment to and from the job."

That indicates that it would be possible to obtain a daily rate by dividing the monthly rate by thirty, but that the daily rate so obtained should be used for every day in which the equipment is assigned to a particular job or operation and, in effect, you would get back to the monthly rate when you do so.

Q. 112. Do you mean it would have to be assigned every day whether the equipment was idle due to rain or breakdowns? A. That's right. The daily

rate would have to be applied to every day between shipment to and from the job, or moving to and from the job.

Q. 113. I wish to call your attention to a letter dated June 16, 1941, beginning at page 79 of Plaintiff's Exhibit 17, and headed, "Adjustment of Compensation." This letter purports to be addressed to the Martin Wunderlich Company, and is to be signed by S. O. Harper, the contracting officer. Did the plaintiff receive this letter? A. We did.

Q. 114. I notice certain enclosures which follow at pages 82 and 84. Were those enclosures received with that letter? A. Yes, they were.

Q. 115. On page 84 there is the heading, "Allowance for Use of Equipment and Operating Expense, Contract No. 12-R-8413—Order for Changes No. 3."

This lists various pieces of equipment and among other things shows a rate per hour. Can you tell from that exhibit how the Bureau computed their rate per hour for the various pieces of equipment? A. No, sir. It wouldn't be possible to tell how they computed the rate per hour from this.

Mr. Sweeney: What is that exhibit number,

please?

Mr. Ruddiman: That is Exhibit 17. The letter begins it.

Mr. Sweeney: Pages 82 and 84.

Mr. Ruddiman: I believe that is right.

# 864 By Mr. Ruddiman:

Q. 116. I will show you a letter dated June 25, 1941, purporting to be sent by S. L. Harper to the Martin Wunderlich Company, and appearing at page 70 of Plaintiff's Exhibit 17, and ask whether you received this letter? A. We did.

Q. 117. This letter states, "There is enclosed a tabulation showing in detail the basis for the determination in connection with the order for changes No. 3." Do sheets 71, 72, 73, 74, 75, 76 and 77 constitute the enclosure referred to in that letter? A. They do.

Q. 118. I will direct your attention to the item of equipment, Caterpillar Tractor Model RD 8, 95 Horsepower, appearing at page 71 of this tabulation, and I will ask you to tell the Court how the Bureau has computed the hourly rate for that particular piece of equipment. A. The Bureau has ar-

rived at a monthly rate for an ownership operation by multiplying the capital value of \$7,905 by the per cent of ownership expense per month, which they have obtained from the Associated General Contractors' schedule. That per cent does not show on this schedule, but they have done that and arrived at a monthly rate, and the monthly rate was in turn divided by 30 to arrive at the first shift

rental rate of \$15.40 per shift for one cater-865 pillar tractor.

Q. 119. And what is the next step? A. They have taken this 50 per cent of the first shift rental rate for a figure of \$7.70 as the second shift rental rate, to arrive at a total of \$23.10 for a rental rate for a caterpillar tractor for one day, on a two-shift operation.

Q. 120. And what is the next step taken? A. To that they have added a maintenance expense figure at 5 per cent of \$4.60 times 16 hours for the day for a total maintenance expense figure for 16—hours; that is, for a two-shift operation, of \$3.68.

The next item is Fuel, which they have taken at 4.7 gallons, and they have a factor at 7 cents a gallon for 33 cents an hour times 16 hours for the two-shift operation, or a total of \$5.25 for fuel for the 16 hours. To that has been added a figure of \$1.12 for lubricating oil and \$1.76 for grease, both of those figures being for 16 hours of operation. And they arrive at a total of \$34.94 as a figure for rental, plus maintenance, plus fuel and lubricants, for

a daily rate on a two-shift or 16-hour basis. They have divided that daily rate for a two-shift operation by 16 to arrive at a supposed hourly rate of \$2.18.

Q. 121. Is this hourly rate of \$2.18 which you have just described the rate which is used in defendant's proposed adjustment for compensation

appearing at page 84 of Plaintiff's Exhibit

866 17? A. It is intended to be, but they have used a figure of \$2.19 instead of \$2.18. It would be very easy by dropping or picking up fractions to account for the cent difference.

Q. 122. To how many hours does that rate apply? A. They have applied it to two items. One, 80 hours of operation, and another, 5,266½ hours of operation.

Q. 123. And what do these hours represent? A. The hours are hours of operation taken from the bill which we submitted to them for compensation under order for changes No. 3, and instead of using the rate as submitted by us, they have taken the \$2.19 rate, computed as we have described.

Q. 124. Do I understand the total hours to which the rate of \$2.19 is applied represents operational hours? A. Yes. The \$2.19 is applied only to the actual hours of operation. In other words, the hours when the equipment was actually operating in the work covered by order for changes No, 3,

Q. 125. Is this in accordance with the AGC schedule? A. Absolutely not. The AGC schedule pro-

vides that their rate must be applied for every day, their monthly rate for every month, and if you arrive at a daily rate, then it must be applied for every day that the equipment is assigned to that particular project or operation. And that has not

been done in this case, so that they have a figure a great deal less than the AGC rental rate would reach if properly computed.

Q. 126. Do I understand that if the rate of \$2.19 is applied to operational hours, no account is taken for idle time to do weather repairs? A. That's right. The operational hours do not make any allowance of time when the equipment was down for weather or for repairs or for any other reason during the time it was on this particular operation.

Q. 127. Have you prepared a statement showing the application of AGC rentals to actual hours of operation? A. I have.

Q. 128. Is this the statement which you have so prepared (hands to witness)? A. Yes, sir, the statement marked 17-E is the statement prepared by me.

Q. 129. Let us take one piece of equipment and have you explain what you have done with that particular piece. I will refer you to the Lima dragline, the first piece of equipment listed in the left-hand column. A. The first column shows the item of equipment in question, in this case, the Lima dragline; the next column to the right shows a figure of \$39,189 for capital value.

Q. 130. Where is that obtained? A. In order to eliminate any possible dispute as to the capital value, I have used the capital value of \$39,189, which was the figure obtained from the Bureau of Reclamation.

The next column shows the approximate per cent of capital value per month, which should be charged as representing a fair figure for the monthly ownership expense. That per cent figure was also obtained from the Bureau of Reclamation. In the item of equipment in question, namely, the Lima dragline, the figure is 5.2 per cent. As a matter of fact, the AGC schedule for the largest dragline listed, I believe, shows a monthly expense of six per cent of the capital value per month, but here again I have accepted the Bureau of Reclamation figures so as to avoid the possibility of any dispute over minor items.

The next column shows the number of that particular item of equipment which were in use on the Vallecito dam project the period April to November, inclusive, 1940. In this particular case it was one.

Q. 131. Just one dragline? A. One dragline of this particular type.

The next column shows the time which the various items of equipment were used during 1940, expressed in months. In this particular case there was one machine used for eight months on an ownership basis, and for six months on an ownership basis.

Q. 132. You mean, used for eight months or six months on all operations, not just on cobble 869 borrow? A. That is correct. This statement covers all operations of these items of equipment on the Vallecito dam project for the period April to November, inclusive, 1940.

The next column shows the rate per month for the first shift and also for the second shift operation. This rate per month, as in accordance with the AGC schedule, is arrived at by multiplying the capital value by the per cent of capital value which should be charged for actual ownership expense for the month.

- Q. 133. In other words, you multiplied \$39,189 by 5.2 per cent to obtain the monthly rate for ownership? A. That is right. The figure in this case is \$2,037.83, which agrees exactly with the monthly rate allowed by the Bureau of Reclamation. That is, not allowed by the Bureau of Reclamation, but computed by the Bureau of Reclamation as being the proper figure to allow for one month's use of the machine on an ownership operation.
- Q. 134. How about the figure \$1,018.91? A. That figure is approximately one-half of the first shift monthly rental rate, and is the method indicated or shown in the Associated General Contractors' schedule as being the proper way to arrive at a second shift rental rate.
- Q. 135. The next column is headed Total Rental For Year. Will you explain the figures in this

column? A. The next column shows the total rental which should be allowed according to the Associated General Contractors' schedule for the use of this particular machine for the period in question. The eight months on an ownership shift basis is multiplied by the \$2,037.83, the first shift monthly rental rate, to arrive at a figure of \$16,302.64. The number of second shift months of operation, namely, six for this particular machine for the year, is multiplied by the second shift monthly expense rate of \$1,018.91, to arrive at the second shift rental of \$6,113.46. The total of the two items for the first shift and second shift rental, respectively, \$16,302.64 and \$6,113.46, is added to obtain the figure of \$22,416.10, which is the total rental which should be allowed for the operation. of this machine for the period in question for the vear 1940.

Commissioner Thompson: This is eight months?

The Witness: Eight months for one shift and six months for the second shift.

### By Mr. Ruddiman;

Q. 136. The next column is headed Hours Worked in 1940. A. That column shows the total number of hours which this particular piece of equipment worked on all operations on the Vallecito dam project for the period April to November, inclusive, 1940, and it is precisely the same period for which the rental of \$22,416.10 should be allowed, in com-

pliance with the AGC ownership and ex-871 pense schedule.

Mr. Ruddiman: Will you please read that last answer?

(Last answer repeated by the reporter)

By Mr. Ruddiman:

Q. 137. Can this figure of 2,876 hours be checked against Plaintiff's equipment records? A. It can. The figure was obtained by me from our records of equipment operation for the project for the period in question.

Q. 138. And that represents all hours worked during the period in question, and not just hours on the cobble borrow? A. That represents all hours

for all operations.

Q. 139. The next column is headed Hourly Rate. Beneath that appears the figure \$7.79. Will you tell us how that figure is obtained? A. That figure is obtained by dividing the total rental due this machine for the period in question by the number of hours of operation for the same period, to arrive at an hourly rate of \$7.79 per hour. The rate so arrived at would be for actual hours of operation based on this particular piece of equipment on the work in question for the period covered.

Q. 140. Do I understand that that hourly figure represents AGC rentals reduced?

Mr. Sweeney: May it please Your Honor, I am not interrupting to object, but may the witness

be permitted to testify where he obtained this source of data and how they computed it?

872 Commissioner Thompson: All right. Go ahead.

Mr. Ruddiman: I will withdraw the question.

By Mr. Ruddiman:

Q. 141. The next heading is Plus Maintenance Rate Figured at Actual Cost. For the Lima dragline you have a figure of \$4.25. Will you tell me where you obtained that figure? A. That figure was obtained from schedule prepared by Mr. Howard and introduced as Plaintiff's Exhibit 17-D, \$4.25 per hour for the Lima dragline for maintenance expense.

Q. 142. And the next column is headed Plus B. of R. Fuel and Lubricant Rate. Beneath this heading is the figure \$1.40. Will you tell me where you obtained this figure? A. That figure is the figure which the Bureau of Reclamation allowed per hour for fuel and lubricants for the Lima dragline, and our figure was somewhat different, so in order to avoid any question concerning the fuel and lubricants rate, I used the Bureau of Reclamation figure wherever available. In this particular case, the \$1.40 is the exact figure which they have allowed, and it would have to be added to the hourly rate as arrived at on this schedule, based upon the Associated General Contractors' ownership expense schedule 17-B, and which had the figure of \$4.27 added to it for maintenance. So that the three figures, the hourly rate based upon the Associated General Contractors' schedule, maintenance of \$7.79, the actual maintenance cost, is obtained from

Plaintiff's Exhibit 17D, and the fuel and lubricants allowance of the Bureau of Reclamation of \$1.40 make a total hourly rate of \$13.44 for the Lima dragline.

Q. 143. I notice opposite some of the figures under the heading Plus B. of R. Fuel and Lubricant Rate there appear asterisks. Can you explain that? A. Yes. In some instances, the Bureau of Reclamation had not allowed a fuel and lubricant rate for the particular items of equipment involved. In those cases I made a calculation of what I thought was a comparable rate to what had been allowed by the Bureau on certain items of equipment. For example, in the case of the Euclid trucks. There are three classes, of which are the 12-yard rear dump, the 15-yard bottom dump, and the 20-yard bottom dump. The Bureau of Reclamation had allowed a figure of 56 cents for fuel and lubricants for the 12-yard rear dump and the 15-yard dump-bottom dump-and I used the same figure of 56 cents per hour for the 20-yard bottom dump. The asterisks are explained on the bottom of the second page, where it says, "Bureau showed no fuel and lubricant rate but used equivalent."

Q. 144. You used the phrase "but used equivalent." Did you use the equivalent? A. That's right. I used the equivalent, or what I thought was the equivalent.

Q. 145. The method which you have first outlined has applied to a single piece of equipment. Will you tell us how you computed the hourly rate when there were several pieces of equipment of the same class? A. Yes. For example, we might take the Euclid 12-yard rear dump truck, which is the third item on the schedule: In that particular case there were six of the Euclid rear dump trucks in operation on the project. And so on an eight months' basis for the first shift, I have multiplied the six, being the number of trucks in use, times the eight months' operation for each one of them, to arrive at a figure of 48 months of operation for one truck for the first shift; and the rate, 48 one-truck months is what the figure would be.

Similarly, for the second shift of operation, I have taken the six trucks for the six months of second-shift operation, and arrived at 36 second-shift truck months of operation.

Q. 146. In the next column for this piece of equipment appears the figure \$695 for first shift. Is that the rate for one month for one truck? A. That's right. The \$695 is the figure for one month for one truck for the first shift. So that figure would have to be applied to the 48, which is the number of truck months on the first shift, to arrive at the rental for the first shift for the six trucks of \$32,360, and for the second shift for the six trucks for the six months' operation of \$12,510, or a total rental

allowance of \$45,870 for the six months for the year in question.

### By Commissioner Thompson:

Q. 147. What are these capital value? A. That is the capital value for just one truck.

Q. 148. One truck? A. That's right. In each instance, the second column from the left is the capital value for one item of equipment only.

Q. 149. All right. A. It must be remembered that under the Associated General Contractors' ownership expense schedule, a lot of factors are taken into consideration, such as depreciation, obsolescence, insurance, interest on investment, and all of the other actual items of expense which a contractor gets when he purchases equipment for operation.

### By Mr. Ruddiman;

Q. 150. In the next column, under the heading Hours Worked 1940, appears the figure 12,845. What does that represent? A. 12,845 is the total number of hours that all of the six Euclid rear dump trac trucks worked during the period April to November, inclusive, 1940, and the total rental for all six was divided by the total number of hours of operation on all six to arrive at an hourly expense rate, based on the Associated General Contractors' schedule, of \$3.79 per hour per truck, and \$3.58 is the hourly rate per hour per truck.

876 Q. 151. Where do you get the figure of

\$2.40 for maintenance? A. That figure is the actual maintenance expense as shown on Plaintiff's Exhibit 17-D.

Q. 152. And where do you obtain the figure of 56 cents shown for fuel and lubricants? A. The figure of 56 cents shown for fuel and lubricants for the 12-yard Euclid trac truck is taken from the information submitted to us by the Bureau of Reclamation under date of June 25, 1941, and is page 70 of Plaintiff's Exhibit 17.

Q. 153. Have you figured the hourly rate for the other equipment in the same way that you have described? A. I have, sir. And the hourly rate for each piece of equipment is the last column on the right-hand side, which rate includes a rental allowance based on AGC schedule; maintenance as figured on actual cost; and fuel and lubricants allowance as given to us by the Bureau, or its equivalent, for a total hourly rate for each hour of operation for one unit of equipment.

Q. 154. Each hour of actual operation? A. That's right, each hour of actual operation.

Q. 155. In general, can you tell me where you obtained the figures for the various pieces of equipment under the heading Capital Value, and under the next heading Approximate Per Cent of Capital

Value Per Month? A. The capital values in 877 most instances are the capital values as given by the Bureau of Reclamation. In some instances, they had no capital value for the I have used the capital value as shown in the equipment ownership expense schedule of the Associated General Contractors. The second column, the per cent of expense per working month, is obtained either from the Bureau of Reclamation schedule or the Associated General Contractors' equipment ownership expense schedule.

Q. 156. Is that per cent the same in both of those schedules? A. Normally, it is the same in both of those schedules. In the case of the Lima dragline, the Bureau allowed only 5.2 per cent, and the AGC schedule allowed 6 per cent, so I took the percentage allowed by the Bureau.

Q. 157. Will you tell us how you computed the hourly rate for the separation plant? A. In the case of the separation plant, we have taken the capital value of \$25,000, which is the original cost of \$20,000 plus \$5,000 additional for remodeling, to arrive at a total capital value of \$25,000.

Q. 158. Let me stop you there: That \$5,000 for remodeling, was that expense incurred prior to the time that you dismantled the separation plant in its original location? A. It was. And to that capital.

value has been applied a figure of 8 per cent.

878 for the per cent of capital value to be allowed.

for monthly ownership expense. In this particular case, based on a three-year life, as the machine had only a three-year life under actual conditions, I have used the 8 per cent figure, which is that shown by the AGS schedule should be allowed for an item of equipment with a three-year life, based on an eight-months' operation.

Q. 159. State what you mean by the phrase appearing in this statement under the figure \$25,000 for separation plant, "3-Year Life of 8 mo. 8% Mo. (Same as Tamping Roller)." A. Yes, that is what is meant by it, and the 8 per cent is also shown by the Bureau of Reclamation as being the proper per cent for monthly ownership expense for an item which has but a three-year life worked on an eight-months' per year basis. The 8 per cent was taken from the Associated General Contractors' schedule; the Bureau had no comparable piece of equipment.

Q. 160. Why do you use a three-year life for this piece of equipment? A. That was all it lasted on the work in question, at Vallecito dam. It was purchased in 1938, and junked after the end of the 1940 working season.

Q. 161. It had three working seasons before it was junked? A. Yes, it had three years, 1938, 1939 and 1940, of operation.

Q. 162. It was new when you bought it?

A. It was new when we bought it.

Mr. Sweeney: Pardon me, did the witness say that the equipment was junked?

Mr. Shields: The separation plant.

#### By Mr. Ruddiman:

Q. 163. Will you explain to the Court the Waukesha motor. The International motor, and the Palmer 50 KV generator described on the statement? A. The separation plant as purchased did not include certain items of power necessary for its operation, so allowance has to be made for a Waukesha motor, an International motor, and the Palmer 50 KV generator, which were all necessary for the operation of the separation plant. Incidentally, the Bureau of Reclamation has allowed all of these items as part of the expense of the separation plant.

Taking the monthly rate that should be allowed for the separation plant for eight months for the first shift basis, six months for the second shift basis, and the monthly rate for the Waukesha motor for seven months only for the first shift operation and six months for the second shift operation, and the monthly figure for the International motor for seven months for the first shift operation and six months for the second shift operation, and the month-

ly figures for the Palmer 50 KV generator 880 for six months for the first shift operation and six months for the second shift operation, we arrive at a total rental of \$24,114 and no cents, which should be allowed for the separation plant, including this auxiliary equipment for the period from April to November, inclusive, 1940. That figure of \$24,114 and no cents has been divided

by the total number of hours of operation of the separation plant for the period in question, which was 1,601½ hours, to arrive at an hourly rental rate of \$15.06. And to that \$15.06 has been added the actual maintenance expense per hour of \$3.67, as shown on Plaintiff's Exhibit 17-D, and the fuel and lubricants rate per hour of \$1.36, which was the figure allowed by the Bureau of Reclamation, to arrive at a total hourly rate for this separation plant, with the auxiliary equipment, of \$20.09 per hour. That is per hour of actual operation.

Commissioner Thompson: We will recess until . 9:30 o'clock tomorrow morning.

(Whereupon at the hour of 3:45 o'clock, p. m., an adjournment was taken until 9:30 o'clock, a. m., Saturday, June 16, 1945.)

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Denver, Colorado Saturday, June 16, 1945.

Met pursuant to recess at 9:30 o'clock, a. m.

Appearances: As previously noted.

Reported: Leonard Rosenfield, Certified Shorthand Reporter.

And thereupon the following proceedings were had:

# George Leonard, resumed the stand for further

#### **Direct Examination**

#### By Mr. Ruddiman:

Q. 164. When we stopped yesterday you were explaining to the Court a statement you had prepared showing the hourly rates for equipment on this job. Does the AGC schedule list monthly rates for all of the equipment which you have listed in this statement? A. No, it does not. For example, the Euclid utility tractor, the last item on page 1. The equipment ownership expense schedule does not list that item, so I have taken an hourly rate of \$1.66 for equipment ownership expense, and to that added 25 cents for fuel and lubricants rate for a total operating rate of \$1.91, which is comparable to the other rates used based upon the Associated General Contractors' equipment ownership expense schedule.

There are one or two other places where it was not possible to get something entirely conclusive, as in the case of the 8-yard Hug trucks, the fourth item on the second page, and the number of hours of equipment use was not conclusive, so I have taken an hourly rate of \$1.95, which is comparable to the other rates on an hourly basis and based upon the AGC schedule. As a matter of fact, these Hug trucks have a capital value of \$8,650, and we have used an hourly rate of \$1.95, as compared with a capital value of the Euclid 15-yard bottom

dump trac trucks, Item No. 4 on the first page, of \$13,000, at an hourly rate computed on actual conditions on the project of \$3.79.

I have also used an hourly rate of a dollar an hour on the International one and a half ton flatbed truck. These variations are noted on the schedule so that they are perfectly apparent and they are comparable and fair based upon the equipment ownership expense schedule.

Q. 165. I call your attention to the figures listed in the last column on this exhibit, and ask you do these figures correctly state for the period April to November, inclusive, 1940, hourly operational rates based upon the AGC schedule? A. They do, based upon the AGC equipment ownership expense schedule, with a proper and fair allowance for maintenance costs and fuel and lubricants costs.

. Mr. Ruddiman: I offer this statement, Plaintiff's Exhibit 17-E.

Mr. Sweeney: Your Honor please, may we at this time ask your permission to defer the detailed cross examination touching this particular exhibit until

after an audit has been completed? We would, however, just like to ask a few questions touching that.

# (Colloquy.)

Mr. Shields: I think the proper procedure now is to cross examine this witness, and then put their auditor on to contradict him if he wishes to.

Commissioner Thompson: I think so, too. I

think you better put the witness on now for cross examination and later, if there is an opportunity, I will let you do it. But I am not going to require him to come to Washington, or require Mr. Shields to go on a long trip just for the purpose of examining on this exhibit!

(Colloquy.)

Commissioner Thompson: Cross examine him the best you can, and if it is possible and reasonable, I will give you another opportunity to cross examine him again, if it can be done without too much expense.

Mr. Sweeney: Thank you.

**Cross Examination** 

### By Mr. Sweeney:

XQ. 166. Mr. Leonard, please, referring to Plaintiff's Exhibit C, the first item, Capital Value, will you tell His Honor, please, do these amounts represent depreciated value of the particular equipment, based upon their age, use, wear and tear that

they have been subjected to, or do those capital values represent the original cost of the

equipment? A. The capital values in most instances represent the original cost, which is the basis upon which the Associated General Contractors' equipment ownership expense schedule is based; and it is also the basis which the Bureau of Reclamation stated they were using in arriving at their rates.

XQ. 167. Tell His Honor, please, where are the records, that is, the books and records, from which this exhibit was made, so we will know for our auditors where they will be available for examination? A. They were made from the Associated General Contractors' equipment ownership expense schedule, which is an exhibit; from the Bureau of Reclamation letter of June 25, 1941, which is an exhibit, as page 70 with attached papers; of Plaintiff's Exhibit 17, and the maintenance rates are taken from Plaintiff's Exhibit 17-D, which is in evidence.

Commssioner Thompson: Just a minute. Let us don't get off on maintenance rates. Let us stick with the capital values.

8

The Witness: I understood he was asking for all of them.

Mr. Sweeney: This question did go to all of them, so the auditors will know where are the records.

Commissioner Thompson: All right. Go ahead.

A. (Continuing) The maintenance rates were taken from Plaintiff's Exhibit 17-D, which is in evidence; and the fuel and lubricants rate taken

from page 70 an attached document of Plain-885 tiff's Exhibit 17, with some figures which

have been supplied by me, covered by my testimony, where they were not available. And I believe all of the information on this schedule is obtained from documents which are in evidence.

### By Mr. Sweeney:

XQ. 168. Now, please, referring to Plaintiff's Exhibit 17-D, as you referred to in the item of Repair Parts for Period, for example, column 1, for example, with respect to column 1, Lima 3½-yard dragline. The amount you have set up for the repair parts for the period noted, that is from April to November, 1940, \$8,195.41. What part is that of the capital value of that piece of equipment? Do you recall offhand? A. Would you read the question, please?

(Last question repeated by the reporter.)

A. Approximately twenty per cent.

By Mr. Sweeney:

XQ. 169. Twenty per cent of it. Mr. Leonard, please, tell His Honor, does that include, or isn't it a fact that that also includes some major replacements of equipment as well as these minor repairs?

Mr. Ruddiman: I object to this line of testimony.

This witness did not prepare that exhibit.

Commissioner Thompson: If he knows he may answer. Overruled.

By Mr. Sweeney:

XQ. 170. You may answer. A. What was the question?

(Last question repeated by the reporter.)

A. I didn't prepare it all. I would know from hearsay; from Mr. Howard's testimony.

### By Mr. Sweeney:

XQ. 171. Now referring to Plaintiff's Exhibit 17-E, and the items of equipment noted thereon. Tell His Honor, please, were these items of equipment originally owned by the plaintiff at the start of the job or did you acquire some of them after the job began? A. Most of the equipment covered by this schedule was purchased new, after acquiring on the job.

XQ. 172. Now, please, in view of your last answer, have you a copy of the exhibit? A. Yes, I have.

XQ. 173. Will you tell His Honor, please, if there is a Euclid trac truck rear dump 2 ZWC L 80 listed thereon? A. No, there is not.

XQ. 174. Referring, please, to Item No. 3 on Plaintiff's Exhibit 17-E for identification, tell His Honor please, if that type of Euclid 12-yard rear dump trac truck, wherein you set up a capital value of \$12,750, in fact, does not include the truck I just mentioned. A. No, sir. These are FDT trucks. The trucks you are talking about were traded in

on the purchase of the newer trucks pur-887 chased specifically for this job. The capital

value in this particular case agrees with the capital value given to them by the Bureau of Reclamation on page 70 and attached papers of Plain-tiff's Exhibit 17.

XQ. 175. That is where you got that figure. Now, you mentioned— A. Incidentally, the figure is correct.

XQ. 176. We are not questioning that, though, Mr. Leonard, please. What we are trying to get at is the capital value of this equipment, whether it was new or second hand. A. The trucks in question, the third item on Plaintiff's Exhibit 17-E, were all purchased new for the Vallecito dam project by the Martin Wunderlich Company, and had not previously, been used on any construction project.

XQ. 177. When were they purchased, please? A. They were purchased, I believe, in the spring of 1939.

XQ. 178. Now, you say that the old trucks were traded in. Are those trucks that were owned by the partnership? A. Yes, they were.

XQ. 179. Isn't it a fact that when this job began in 1938, that certain equipment, including Euclid trac truck rear dump No. 2 ZWC L 80; Euclid trac truck rear dump 2 ZWC L 4; Euclid trac truck rear dump 2 ZWC L 5; Euclid trac truck rear dump 2

ZWC L 7; Euclid trac truck rear dump 2
888 ZWC L 9; Lima shovel 1 No. 451; R 18 caterpillar tractor No. 1 H 849; RD 7 caterpillar tractor No. 9 C-1274 W; General Electric welder No. 1692359; Kohler light plant No. E 24883; Kohler light plant No. E H 30050; two-ton International truck (flat bed) No. C-35-17868; Schramm compressor, model 315, No. 315028, were rented by the partnership early in 1938 from Dale B. Levi of Denver? A. I have a very good memory but, obviously, I could not hope to remember serial numbers of

equipment from 1938, to the present time. But I can answer your question generally, that none of this equipment was rented from Dale B. Levi, or anybody else.

XQ. 180. They were not? A. No, sir.

By Commissioner Thompson:

XQ. 181. None of which equipment? A. The equipment he referred to, generally speaking. I think I know the equipment generally that he spoke about.

### By Mr. Sweeney:

XQ. 182. Just from that general description I have given you now, tell His Honor please, are any of the items I have just named, from the general description, included in Plaintiff's Exhibit 17-E for Identification? A. I certainly cannot remember serial numbers for a period of seven years.

I wouldn't attempt to be specific as to any item of equipment in that connection.

XQ. 183. You are the man that really knows what equipment this partnership owns or used on this job, or what equipment they had before they started. A. I am familiar with the Martin Wunderlich Company equipment, yes.

XQ. 184. And isn't it a fact when you started this job you had a capital value on all of your equipment of about one hundred eighty-seven or ninety thousand? A. I wouldn't remember.

XQ. 185. Just roughly. A. I wouldn't remember. As a matter of fact, most of the equipment covered by the schedule was purchased new after we obtained the job.

XQ. 186. Refer, please, to Plaintiff's Exhibit E, the second item, and tell His Honor, please, the Lima shovel, when was that purchased? A. That was purchased, I believe, in 1936.

XQ. 187. That is the year before the job started?

A. Two years.

XQ 188. Two years. Now tell His Honor please, is that the Lima shovel that was rented by the partnership from Dale Levi? A. The partnership rent-

ed no equipment from Mr. Dale Levi.

XQ. 189. The partnership rented no equip-

ment from Mr. Dale Levi? A. That's right.

XQ. 190. Now, referring to Item No. 3. You have already touched that. Did the partnership rent that equipment from Mr. Dale Levi in August or early in 1938, or any other time during the period of this job. A. This equipment in Item 3 was not yet made in 1938.

XQ 191. When was that purchased by the plaintiff? A. I have already testified I believe it was purchased in the spring of 1939.

XQ. 192. 1939? A. Yes.

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XQ. 193. Now refer, please, to the Item RD-8 caterpillar tractors. How many caterpillar tractors are involved in the item—more than one? A. There are nine of them.

XQ. 194. Nine? A. Yes.

XQ. 195. Tell His Honor please, if these tractors were rented by the partnership from Mr. Dale Levi for use on this job. A. No equipment was rented by the partnership.

XQ. 196. Just this item, please.

891 Commissioner Thompson: If he tells you that no equipment was rented, what is the use of asking as to each particular item?

By Mr. Sweeney:

XQ. 197. In view of His Honor's admonition, is your answer that none of the items listed on Plaintiff's Exhibit 17-E were rented from Dale Levi?

A. That is correct. None of the equipment listed on Plaintiff's Exhibit 17-E was rented from Dale Levi.

XQ. 198. At any time during the course of this work? A. At any time during the course of this work.

XQ 199. Were they purchased by the partnership from Dale Levi? A. No, they were not purchased by the partnership from Dale Levi.

XQ. 200. Were all of the equipment that are listed on this exhibit originally owned by the partnership, or subsequently acquired by it during the performance on this job or for use on the job? A. Every item of equipment listed on this schedule, as near as I can recall now, at least, was purchased new by the Martin Wunderlich Company partnership.

XQ. 201. And your books and records will contain the pertinent data showing the date of acquisition? A. I believe so.

892 XQ. 202. And the date any old equipment was traded in? A. I believe so.

XQ. 203. And the amount allowed on the new equipment, and so forth? A. Yes.

XQ. 204. Now will you refer to page 2, coming down to the item of Separation Plant, the eighth item, Separation Plant. It is noted that the original cost of that plant is \$20,000. Am I correct in my understanding that the plant was originally purchased by the partnership from the Robbins Company at a contract price delivered of \$18,000? A. The \$18,000 figure is correct. But the Associated General Contractors equipment ownership expense schedule provides that to that must be added the original cost of erection, freight and transportation. It must be recalled that this project was not located on the railroad, and it was extremely expensive and difficult to get equipment into it. So that the capital value which was set up for this machine must include something in addition to the factory price.

XQ. 205. Your books and records will show exactly how you arrived at the \$20,000 base figure? A. The \$20,000 base figure is also used by the Bureau of Reclamation in the schedule attached to their letter of June 25, 1941, which is page 70 of Plaintiff's Exhibit 17.

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XQ. 206. We understand that, please—Commissioner Thompson: Wait a minute.

That does not quite answer his question. He wants to know if your books and records will show the extra \$2,000 you capitalized, along with the \$18,000.

The Witness: I have testified, Your Honor, that the \$20,000 figure in this particular case was obtained by using the figure which the Bureau of Reclamation agreed was the capital value on this particular item, and that is where the \$20,000 figure was obtained.

### By Mr. Sweeney:

XQ. 207. The amounts above \$18,000, then, of the original purchase price of the equipment delivered represents an item based upon the factors you have considered and just testified to, and the AGC rates? A. The Bureau of Reclamation—that the Bureau of Reclamation considered, because I have used their figures.

XQ. 208. I am asking you what figures you took. Sometimes the Government's are not only fair and just but they are extremely generous. We want to know just what figures you used. A. I believe the \$20,000 figure is low.

XQ. 209. Do you think it is low? A. Yes, sir.

XQ. 210. Then you have an item, please, for remodeling, one-third remodeling and reinforcing, \$5,000. Is that one-third of this amount of

894 \$15,074.90 that was set up in the plaintiff's

Bill of Particulars that was filed in connection with the claim prosecuted by the Robbins Company against the partnership for "attempting to make said equipment capable of performing as plaintiff represented it would and could perform"? A. It is approximately one-third of a \$14,000 figure of expense we had on this plant for remodeling costs.

XQ. 211. Now, please refer to the equipment items that follow and that relate to the separation plant and that total, \$29,538, that is added to the sum of twenty-five, that would be \$4,538. Tell His Honor, please, if it is not a fact that those are the items of equipment that were added to this separation plant at the time that the plant was remodeled during the period that they started operations in April, 1940, to June 21, 1940. A. What was that?

(Last question repeated by the reporter.)

A. I don't know when these particular items of equipment were added to the plant.

XQ. 212. Tell His Honor, please, if it is not a fact that the plant was set up for operation on May 12, and ra a test run in the presence of Mr. Wunderlich, a lit was unsatisfactory, and then the equipment was torn down and moved. Do you recollect that? A. No, I don't recall. I wouldn't know about that.

895 Mr. Sweeney: Strike "torn down." It was just moved and remodeled. Strike that question, Your Honor, please.

#### By Mr. Sweeney:

XQ. 213. Do you recall, please, that following a short test run in the presence of Mr. Wunderlich on May 12, 1940, that the plant was shut down during the period of May 13, 1940, to June 21, 1940, during which time the partnership remodeled the plant to eliminate the difficulties of operation that were encountered during the short test run? A. All I could testify to that would just be hearsay.

XQ. 214. That is, you were not on the job, were you? A. Not at that time.

XQ. 215. Very few times? A. Just infrequently.

XQ. 216. For example, this Captain Frenam, the office engineer on the job, when is the first time you ever saw him? A. I don't know for sure. I believe it was the other day.

XQ. 217. Just the other day? A. I believe so.

XQ. 218. Did you ever see him on the job? A. I don't recall that I did. I moved.

XQ. 219. You were not on the job very often. Your business was taking care of the office and managing the business of the partnership, is that

correct, Mr. Leonard? A. That's right.

896 XQ. 220. You were not a field man? A. I do not do office work. I have not been to the Jefferson City office but three times in the last six years.

XQ. 221. You understand what I mean—you are Mr. Wunderlich's trouble-shooter and general manager, and you run the business for him? A. I. am general superintendent, yes, sir.

XQ. 222. Tell His Honor, please, if it is not a fact that this remodeled separation plant that is described on Plaintiff's Exhibit 17-E, page 2, began operating June 21, 1940, and kept running continuously in that pit for the remainder of the season up to the date you have noted on the exhibit, November, 1940, and that it operated very satisfactorily?

A. The question will require a measure of interpretation.

XQ. 223. Yes. A. The plant was set up or started as set up originally in April, and was on this particular item until November. As to how satisfactory it operated, most of my evidence will be hear-say, but it did screen out to approximately 900,000 cubic yards of cobble material, and I believe operated satisfactorily.

XQ. 224. Nine hundred thousand cubic yards of cobble or earth material? Which? A. Cobble.

countered a comparatively small amount of cobble material in Pit 2, that there has been so much discussion on, that it was practically one-tenth of the total of the earth material excavated from that particular borrow? A. That would depend upon what you call cobbles. Cobbles are defined as all materials over two and a half inches in diameter. I believe on the basis of that size the percentage would be somewhere between twenty and thirty per cent. As a matter of fact, all screening was done on the basis of a five-inch screen at writ-

ten request to the Bureau of Reclamation, and on that basis the percentage would, of course, be somewhat less.

XQ. 226. Mr. Leonard, please, we have reference to cobbles as defined in this contract. A. Cobbles as defined in this contract, if I recall correctly, are all rock—

XQ. 227. You do not need to read it, please. A. I

was not through, sir.

XQ. 228. I am referring to the cobbles as defined by this contract. A. I haven't finished my answer.

XQ. 229. Go ahead. A. Cobbles as defined in this contract, I believe, is all rock over two and a half inches in diameter.

XQ. 230. From what paragraph are you now reading, so the record may be complete? A. I wasn't reading from a paragraph, but I think I can find it.

XQ. 231. Yes, tell the Court just what paragraph you are referring to. A. The cobble and rock fill shall consist of cobbles—

XQ. 232. What paragraph are you reading from?

A. Paragraph 52 of Plaintiff's Exhib.: A.

XQ. 233. 52, did you say? A. 57, of Plaintiff's Exhibit A, headed, "Cobble and Rockfills on Slopes of Embankment," and I quote, "The cobble and rockfills shall consist of cobbles over two and a half inches in diameter separated from required excavation and from materials excavated from cobble borrow pits as provided in paragraph 51:" I believe that is the only place where cobbles are defined.

XQ. 234. Well, now, will you please refer to paragraph 56 on page 87? Have you the specifications referring to paragraph 56, and for the record, it is on page 87—strike that.

Commissioner Thompson: I think you are both getting into an argument about the question to be decided.

Mr. Sweeney: No, we are not concerned with side remarks, Your Honor. We are referring 899 now to this complaint, and will be very brief.

# By Mr. Sweeney:

XQ. 235. This plant you were referring to, please, you set up a total capital value of \$29,538—including the parts that were added when it was remodeled in 1940, is that correct, Mr. Leonards? A. I was answering, sir, including the auxiliary equipment which had to be added to the power plant to make it operate.

XQ. 236. And that was in 1940, wasn't it? A. I have testified Ldon't know exactly when these items were added.

XQ. 237. Well, you have set up rental rates for the period between April to November, 1940. Are you including something that was added in 1938, or 1939? A. They were added prior to April of 1940, or thereabouts, and they were used with this separation plant during the 1940 operating season.

"XQ. 238. That is what we want to know. They may have been purchased in anticipation or purchased prior to the period noted on page 2 of this

exhibit, for the purpose of remodeling the plant so it would operate more efficiently in 1940. A. They may have been added to the plant prior to 1940, but they were on the plant in 1940, and operated with it.

900 XQ. 239. Please calculate the figures and tell His Honor if the total is \$29,538 for the separation plant, including the auxiliary parts. A. I believe that figure is correct.

XQ. 240. Now, refer, please, to the column Total Rental for Year. Have you found that? A. Yes, I have it.

XQ. 241. The figures noted on page 2 of Plaintiff's Exhibit E state that the total rental for the year for this equipment is \$24,114. Now, tell His Honor please, if that is the rental for the period during which this plant was operating in 1940, whatever that was, that is, during the working season. A. Well, the word "Rental" will probably require a measure of definition.

XQ. 242. Will you answer my question directly, and then if you wish to amplify it or make any explanation, I am sure His Honor will permit you to.

Commissioner Thompson: Read the question back and let us see what it is.

(Last question repeated by the reporter.)

Commissioner Thompson: What is this rental of? I mean, for what period?

Mr. Sweeney: This is the rental, Your Honor please, of the separation plant—those are the figures.

Commissioner Thompson: Yes, but for what period of time?

901 Mr. Sweeney: For the period noted on this exhibit. It states for the period from April to November, 1940. I am asking if that is not the rental rate for the period during which it was actually operating during the working season. A. That figure of \$24,114 is equipment ownership expense based on the Associated General Contractors' equipment ownership expense schedule which is in evidence.

## By Commissioner Thompson:

XQ. 243. Now, for what period of time? A. For the period as stated on the exhibit—April to November, 1940.

XQ. 244. That is all it includes? Is that all the time it includes? A. That would also require some explanation. This is the amount of money which, according to the equipment ownership expense schedule should be recovered to cover six items of expense for the calendar year 1940, and that recovery must be during the period when the equipment is operating.

## By Mr. Sweeney:

XQ. 245. Now, Mr. Leonard, please, you just referred to six items of expense. Are those the six items of expense referred to on page 1 of the AGC rates in evidence as Plaintiff's Exhibit 17-B? Under the heading of "Explanation of Items of

Equipment Ownership Expense, Contractors' Annual Equipment Expense," as far as pertinent,

starts, "The annual equipment expense is composed of but six items, which are as fol-

lows: (1) Depreciation, (2) Major Repairs and Overhauling, (3) Interest on the Investment, (4) Storage, Incidentals and Equipment Overhead, (5) Insurance and (6) Taxes." Those are the cost factors that you referred to? A. Those are the cost factors involved in the equipment ownership expense, as agreed with the Bureau of Reclamation

for the claimin question.

XQ. 246. You say that is based upon the Bureau of Reclamation figures. All right. Now, sir, please, on your direct you testified that this separation plant had a life of only three years. What is that based upon? I ask you to refer to Plaintiff's Exhibit 17-B, AGC rates, and referring to any data in that exhibit on the basis of which you just testified the statement that this plant had only a life expectancy of three years. A. I testified that the actual life was three years.

XQ. 247. Now, you disregard the data set forth in the AGC rates, Plaintiff's Exhibit 17-B. A. No, I don't sir. I followed them specifically.

XQ.248. What is that? A. I followed that specifically.

XQ. 249. You do? Isn't it a fact, please, that the AGC rates in evidence as Plaintiff's Exhibit 17-B on page 16—have you that in front of you?

Have you page 16, now? Have you found 903 the comparable equipment referred to in the

· AGC rate schedule and that you referred to and have been referring to in your testimony?

Commissioner Thompson: On page what?

Mr. Sweeney: On page 16, Your Honor, please. Commissioner Thompson: Page 16?

## By Mr. Sweeney:

XQ. 250. Under the heading "Pit and Quarry Plants (Portable)" that "16" is at the bottom of the page and is headed, "Pit and Quarry Plants (Portable), Crushing and Loading," then you come down to "Crushing, Screening and Loading," and then refer, please, to the heading, "Heavy-duty single crusher, large capacity," and tell His Honor, please, what the depreciation rate is for that item of equipment, Mr. Leonard. A. The crusher?

XQ. 251. "Crushing, Screening and Loading \* \* \* heavy-duty single crusher, large capacity," and tell His Honor, please, what the depreciation rate is. Isn't it a fact that 17-B—

Mr. Shields: One question at a time, please.

Commissioner Thompson: Wait a minute. You are lumping two items together.

Mr. Sweeney: No, Your Honor, just one. May I ask this question?

# By Mr. Sweeney:

XQ. 252. Referring to page 16 of the AGC schedule, which is Plaintiff's Exhibit 17-B, will

904 you tell His Honor the comparable equipment listed in that schedule that you used when you used the AGC rates in making your calculation on Plaintiff's Exhibit 17-E? A. My testimony is that we have used an actual life on this particular item of equipment because it was used only on this project, and on the basis of the actual life of three years, I used an eight per cent per month figure—

Mr. Sweeney: I pray Your Honor's judgment, please, the answer is not responsive. I have been most reluctant heretofor to interrupt this witness while he is rambling on, and I have asked a direct question.

Commissioner Thompson: Ask the question again.

Mr. Sweeney: This is very important.

Commissioner Thompson: Ask him. Go on. Reask him and get started.

Mr. Shields: I wouldn't talk about rambling-

Mr. Sweeney: When you stopped to ramble—

Commissioner Thompson: Just a minute! Go on and ask the question.

Mr. Sweeney: Well, I made a hole for that one, Brother George.

By Mr. Sweeney:

XQ. 253. Referring to page 16, please, of the AGC rental schedule in evidence as Plaintiff's Exhibit 17-B, and point out to His Henor the comparable equipment in this schedule that

you used in calculating the rates relating to separation plant set out on page 2 of Plaintiff's Exhibit 17-E. Just describe it. A. I haven't testified—

## By Commissioner Thompson:

XQ. 254. Can you point out the comparable equipment in your screening plant? A. Yes, I can.

Mr. Sweeney: Read it, please, for the record. A. (Continuing) "Screening and Loading" plant, none of which have been referred to before by the defendant's attorney, which is the sixth item below the heading "Pit and Quarry Plants (Portable)."

## By Commissioner Thompson:

XQ. 255. Is that Heavy duty, large capacity? A. Heavy duty, large capacity, screening and loading plant, which has an equipment ownership expense rate of 6.7 per cent base rental.

## By Mr Sweeney:

XQ. 256. Wait, please. Just answer my question. You are going beyond my question. Go ahead.

Commissioner Thompson: He has answered the question. Ask him another one.

# By Mr. Sweeney:

XQ. 257. Tell His Honor please, if it is not a fact that the depreciation rate applicable to that906 equipment described you have is 17 per cent.

A. On the items covered here the depreciation rate is 17 per cent.

XQ. 258. That is a six-year life expectancy, isn't it? A. Approximately, yes.

XQ. 259. Now, you testified to His Honor that this equipment was junked. When was it junked? A. After completion of the project.

XQ. 260. That was sometime in 1940, was it? That is when you completed your excavation work at the site? A. No. I believe it was later than that.

XQ. 261. Tell His Honor please, if it is not a fact that after the plaintiff in this suit received the contracting officer's findings, this separation plant was sold and shipped out of the site? A. It was sold as junk, yes. We got what salvage out of it we could.

XQ. 262. You sold it as junk? A. Yes, sir.

XQ. 263. Did you make any effort to renew or replace certain parts of the equipment? Did you make any effort to do that before you sold it, or, rather, solicited proposals for its purchase? A. I

don't believe so. We did attempt to sell it as 907 a plant but were unable to. I think it laid around the job for a couple of years after completion of the project.

XQ. 264. A couple of years after the job was completed? A. Yes.

XQ. 265. You are referring to the time that the excavation was completed, is that correct? A. That the work which this plant did was completed, yes.

XQ. 266. Isn't it a fact that at that time certain replaceable parts could have been renewed and the equipment continued in use indefinitely? A. You

can start with any kind of junk and make a plant out of it if you put in all new parts.

XQ. 267. Could you do it with junk? A. Yes.

XQ. 268. And this equipment was junked when you finished using it in 1940? A. We junked it. I am not saying it was junk when we finished using it.

XQ-269. Do you remember whom you sold it to?
A. Yes.

XQ. 270. Did you sell it to a junk man? A. I sold it to an equipment dealer in Los Angeles.

XQ. 271. And the name of the equipment dealer?

A. Wes Durston.

908 XQ. 272. Los Angeles is a considerable distance from the site of this dam at Vallecito, Colorado, isn't it? A. It is.

XQ. 273. A pretty expensive proposition to ship out a heavy plant like that to Los Angeles, isn't it? A. It wasn't shipped. Durston had a heavy trailer truck going through that territory which he purchased in the East, and he picked it up with that and hauled it to Los Angeles along with some other junk.

XQ. 274 Assuming it is a thousand miles or more, or, anyway, whatever the distance is, a junk man would not be called upon to hauf a plant a thousand miles across the country; would he? A. I have explained what happened to it.

Mr. Sweeney: That is all on this now, Your Honor, please, and we reserve the right, as we requested at the outset, to cross examine in detail when we receive the auditor's report. Thanks, gentlemen.

Mr. Ruddiman: I renew the offer of this statement as an exhibit.

Commissioner Thompson: Yes, let it be filed.

Mr. Sweeney: May the record show an objection by the defendant, Your Honor please, on the ground that the exhibit obviously does not reflect the fair and just rates based upon either the AGC schedule or the Bureau's rates.

909 Commissioner Thompson: Let the record show the objection is overruled and exception taken.

(The document referred to above, marked Plaintiff's Exhibit 17-E, is filed in connection with this case.)

#### Redirect Examination

#### By Mr. Ruddiman:

RDQ. 275. You have testified that the most of the equipment shown in Plaintiff's Exhibit 17-E was new. Is that correct? A. That is correct.

RDQ. 276. And what was the condition of the balance of the equipment prior to April, 1940? A. The balance was in good operating condition.

Mr. Ruddiman: That is all.

Mr. Sweeney: No further cross, Your Honor.

Commissioner Thompson: Is that all of this witness?

Mr. Rudiman: Just a little bit more.

## By Mr. Ruddiman:

RDQ. 277. Have you prepared a statement showing the cost of operations in the cobble borrow in Borrow Pit No. 2 during 1940? A. I have.

RDQ. 278. Is this the statement to which you refer? A. It is.

RDQ. 279. Will you explain to the Court the figures on that statement? A. Yes. This is headed

Vallecito Dam Project. Summary, Actual 910 Cost Cobble Borrow, 1940. The first heading

is Labor, total of \$61,193.72. Under that is listed amounts paid for insurance and taxes in the amount of \$6,112.63.

RDQ. 280. Where did you obtain those figures? A. Those figures were obtained from page 86 of Plaintiff's Exhibit 17, as testified to by Mr. C. V. Howard.

The next heading is Equipment Rental. The items of equipment, hours of equipment, were obtained from the same page 86 of Plaintiff's Exhibit 17. The rates of equipment have been obtained from Plaintiff's Exhibit 17-E, about which I have just testified. The amounts are computations, for a total equipment rental of \$313,272.95. That figure is referred to as Equipment Rental. As a matter of fact, it includes equipment ownership expense, plus maintenance rate, plus fuel and lubricants rate. The figures on the material for remodeling and setting were obtained from page 86 of Plaintiff's Exhibit 17, as were the figures on Dynamite and

Supplies. The balance of the figures are either multiplications or additions to arrive at a total expense on borrow pit No. 2, for the year 1940, of \$422,960.99.

RDQ. 281. The last figure you mentioned includes 10 per cent for profit? A. It includes ten per cent but not for profit, That is principally overhead. We obtained the figure from the ten per cent which the Bureau of Reclamation says they al-

lowed for overhead and profit, but as a 911 matter of fact, it wouldn't cover the overhead.

RDQ. 282. And the figure to which you have aplied the ten per cent is \$384,509.99? A. That's right.

RDQ. 283. And does that represent the cost of operations in borrow pit 2 during the year 1940, as shown by plaintiff's records? A. It does. Except that there are items of cost that are not taken into consideration. For example, there is no allowance in this for a proportion of the expense of moving in and out of the bulk of the equipment, so that this statement covers only the items of costs as shown on the schedule.

Mr. Ruddiman: That is all on that. I offer that as Plaintiff's Exhibit 17-F.

Recross Examination

By Mr. Sweeney:

RXQ. 284. Tell His Honor please, when was this exhibit prepared, Mr. Leonard? A. This was pre-

pared within the last week, in the Cosmopolitan Hotel.

RXQ. 285. Just one question: Plaintiff's Exhibit 17-E, when was that prepared, Mr. Leonard? A. At the same time.

RXQ. 286. And the source of the data, please, used in making the calculations? A. I have just testified that the bulk—

RXQ. 287. You have indicated that— A. (Continuing) —of the information was obtained from page 86, I believe it is, 86 and 87, of Plaintiff's Exhibit 17, and that the rates on the equipment are taken from Plaintiff's Exhibit 17-E.

RXQ. 288. Does this exhibit list so-called rock rakes, and bulldozers that were used on the job?

Commissioner Thompson: Covers what?

Mr. Sweeney: The rock rakes and bulldozer, if Your Honor please, in addition to the screening plant. A. There are no rock rakes listed as such.

## By Mr. Sweeney:

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RXQ. 289. Refer, please, to the item of Sheepsfoot Roller, under the heading of Equipment Rental, and tell His Honor where that is listed on the exhibit. A. Lean only speak from hearsay on that.

Mr. Sweeney: Defendant objects to the offer in evidence of this document, Your Honor please, on the ground it does not reflect a fair and just rental rate of the equipment used in connection with these operations.

Commissioner Thompson: I will overrule the objection and let it be filed for whatever it is 913 worth.

#### Redirect Examination

## By Mr. Ruddiman:

RDQ. 290. I will show you Plaintiff's Exhibit 17-A, and particularly plaintiff's letter of April 8, 1941, to Mr. Burns, enclosing a claim for adjustment under Order for Changes No. 3. This letter appears at page 1 of Plaintiff's Exhibit 17-A. I will ask you if pages 2 and 3 and the following pages are the detail sheets referred to in the letter on page 1.

Commissioner Thompson: How many pages following & There are a raft of pages. Do you mean

all that follow? There are a lot of pages.

Mr. Ruddiman: All pages following. A. Yes, the pages from 2 to 172 are the detail sheets referred to in the letter, page 1 of Plaintiff's Exhibit 17-A.

Commissioner Thompson: Were they enclosed with the letter?

## By Mr. Ruddiman:

RDQ. 291. Were they enclosed with the letter?

A. Yes, they were.

RDQ. 292. I call your attention to the rates of equipment appearing at page 2 of Plaintiff's Exhibit 17-A, and ask you who prepared these rates. A. I did.

RDQ. 293. Will you tell the Court what you took into account in preparing these rates? A.
914 They are based on the Associated General

Contractors' equipment ownership expense schedule. The equipment ownership expense schedule lists nothing but monthly rates. The time of operation of the various items of equipment under Order for Changes No. 3 was kept on the basis of hours of actual operation. So that it was necessary, in order to arrive at the cost, to reduce the equipment ownership expense monthly rates to hourly rates, and to add thereto proper allowance for maintenance and fuel and lubricants. We arrived at the hourly rate by taking the Associated General Contractors' monthly rate for one shift of operation and dividing that by 30, to get a supposed daily rate, and dividing that daily rate by 8 to get an hourly rate, and to that was added the figure for maintenance and fuel and lubricants.

Mr. Sweeney: Pray Your Honor's judgment, we submit that has been gone into extensively heretofore on direct in explanation as to how these figures were arrived at on this exhibit.

© Commissioner Thompson: I think he is entitled to introduce whatever testimony he needs to on this, so let him go ahead.

By Mr. Ruddiman:

RDQ. 294. Weren't you operating on a two-shift basis every month of this period? A. We were.

RDQ. 295. Why did you use the one-shift rate, then? A. In reducing a monthly rate to an hourly rate, some allowance must be given

for the inevitable lost time, and in taking the monthly rate for one shift and reducing it to an hourly rate, we had thirty days a month and an eight-hour day, we figured we were making a fair and just allowance for idle time.

RDQ. 296. I show you a letter dated June 23, 1942, from the plaintiff to Mr. Harper, purporting to enclose corrected figures on the cost of operations in borrow pit No. 2, and will ask you if that letter was sent? A. It was.

RDQ, 297. That letter, incidentally, appears at page 85 of Plaintiff's Exhibit 17. And were all of the sheets which follow this letter enclosed with the letter? A. Sheets 86, 87, 88, 89, 90, 91, 92 and 93, of Plaintiff's Exhibit 17, accompanied the letter of June 23, 1942, which is sheet 85 of Plaintiff's Exhibit 17.

RDQ. 298. I call your attention to the rates for equipment appearing at page 2 of Plaintiff's Exhibit 17-A. A. They were computed in the same manner. In some instances, both of these statements referred to a different hourly rate used for items of equipment used less than 100 hours per month.

Mr. Ruddiman: That is all on 17.

Commissioner Thompson: We will recess for a few minutes.

(Short recess.)

916 Mr. Ruddiman: Your Honor, I have one more question I want to ask on Claim 17.

By Mr. Ruddiman:

RDQ. 299. I call your attention to the figures used by the Bureau in computing their rental rates, and in particular to page 73 of Plaintiff's Exhibit 17. I note that they have used a figure of thirty cents an hour for maintenance of a Lima dragline. Based on your experience, does this represent a reasonable rate for maintenance on a Lima dragline? A: No, the thirty cents per hour is ridiculously low. That Lima dragline has a capital value of \$39,000, and the Bureau has used a figure allowed slightly higher than the caterpillar RD-8 tractor, which has a capital value of \$79,000, approximately. which is roughly one-fourth of the capital value of the machine in question. And they have added only seven cents per hour to the caterpillar maintenance rate which they used, and that in itself was ridiculously low. So that the figure of thirty cents per hour would not even begin to take care of the maintenance expense on a 31/2-yard Lima dragline.

RDQ. 300. Is that true of the rates for maintenance used by the Government on the other pieces of equipment? A. Yes, it is. The next item is a Euclid tractor truck, on which they allow eighteen cents an hour. The tractor truck has a capital value of \$13,000, and eighteen cents would not take care of the maintenance on your upkeep. All of

917 their maintenance rates are ridiculously low.

Mr. Ruddiman: That is all.

#### Recross Examination

### By Mr. Sweeney:

RXQ. 301. Mr. Leonard, please, you know, as a matter of fact, that the Bureau rental schedule in evidence, Plaintiff's Exhibit 17-C, is based upon the Associated General Contractors' schedule of average ownership expense—you are familiar with that? A. Up to the point that it computes its monthly rates as based upon the Associated General Contractors' equipment ownership expense schedule.

RXQ. 302. Only to that point, so far as you understand and interpret it? A. That's right.

RXQ. 303. On direct, you explained to His Honor how you reduced the monthly rate and calculated an allowance for idle time. Do you recall that? A. Yes, I do.

RXQ. 304. Now, we invite your attention, please, to page 3 of the AGC manual in evidence as Plaintiff's Exhibit 17-B, and only to the first three lines, headed Daily Equipment Expense. "Since the idle time of equipment is taken care of by a factor in the monthly expense, no such factor should be used in computing a daily rate." Are you familiar with that? A. Yes, sir.

918 RXQ. 305. Are you also familiar with the provision in the Bureau of equipment rental

schedule, Plaintiff's Exhibit 17-C, paragraph 2, subparagraph (e), "For each machine, a period of idle time each year is allowed, hence, no further allowance in rental rate is required for the time consumed in moving equipment to and from a job or for time out for repairs." Were you familiar with that also when you testified? A. Yes, I am.

Mr. Sweeney: That is all. Take the witness.

#### Redirect Examination

## By Mr. Ruddiman:

RDQ. 306. Are you also familiar with the statement appearing at page 2 of Plaintiff's Exhibit B, which provides that the monthly rate is not subject to deductions for Sundays or holidays, and should be charged for the full calendar period elapsing between shipment to and from the job? A. I am, sir.

RDQ. 307. And are you familiar with the provision appearing at page 3 of this exhibit reading as follows: "When a machine is charged to a job on a daily basis the rate should be charged for each calendar day without deduction for Sundays and holidays or other idle time during the period it is assigned to the job"? A. I am. The monthly rates are not subject to being used as hourly rates unless

proper allowance is taken of idle time when the hourly rate is applied. There is no essential difference between the monthly rates in the equipment ownership expense schedule and the monthly rates in the Bureau of Reclamation sched-

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ule. The difficulty arises when they divide those monthly rates by thirty for a daily rate, and by sixteen for an hourly rate and then apply that hourly rate only to the actual hours of operation. In doing so they make absolutely no allowance for idle time.

Mr. Ruddiman: That is all.

Recross Examination

By Mr. Sweeney:

RXQ. 308. Tell His Honor please, if it is not a fact that the hourly rate provided by the Bureau is applicable only to equipment in use for a few hours per day on work under cost-plus contracts, and is intended to compensate for moving and setting up equipment for short-time jobs or for the actual time equipment is employed on intermittent work. Is it not a fact? A. The hourly rate used by the Bureau in computing what they claim was a proper allowance—

RXQ. 309. Just answer the question, please.

Commissioner Thompson: Answer Yes or No, and then go on, or can you answer that yes or no?

A. Would you read the question, please?

(Last question repeated by the reporter.)

A. I can't answer that yes or no because he is not specific as to what hourly rate provided 920 by the Bureau.

RXQ. 310. Is that the only answer you wish to give to that question? A. No. I would like

to go on. The Bureau of Reclamation has provided an hourly rate in their rental schedule in which they have completely ignored in computing the allowance which they claim is due the contractor under Claim No. 17—

RXQ. 311. That is your interpretation or qualification to your answer. Tell His Honor, please, if it is not a fact it costs just as much to transport and set up equipment on a small job as it does for a big one. You have the same hauling charge, have you not, the same setting up charge if your job was ten thousand or ten million? A. You mean if the equipment is the same?

RXQ. 312: Yes, if the equipment is the same. A. And all other conditions are the same?

RXQ. 313. Assuming that fact. Then you would be paid more money than if you were paid on monthly rate, would not that be a fact? A. As a matter of fact, you don't get similar conditions between the large job and the small job, so it is difficult to make an answer to that question.

RXQ. 314. That is, you just don't want to answer that question directly. Tell His Honor, please, if it is not a fact that the work covered particularly

by Claim 17 was performed under a con-921 tinuous seasonal program. Answer that. A. That's right.

RXQ. 315. You have already testified that you operated some of this equipment on a two-shift per day basis. A. It was all operated on a—

RXQ. 316. "All operated"— A. I didn't get to finish my answer. It was all operated on a two-shift basis, with the exception of a Kohler light plant and possibly one or two very minor items of equipment.

RXQ. 317. Also tell His Honor, please, if it is not a fact that you conducted the job on a seven day per week operational period. A. When we could, yes.

RXQ. 318. That is, when seasonal conditions permitted you to carry on the work, isn't that right?

A. When we could operate on a seven-day basis, we did.

RXQ. 319. You have already testified that all of your equipment except the light plants were used under the described two-shift program. A. That's right.

RXQ. 320. It is a fact, is it not, please, that some items of the equipment were used alternately on the work under claim Item 17, and on other parts

of the contract not covered by Claim 17?

922 A. Some were.

Mr. Sweeney: That is all, Your Honor. Take the witness. That is all on Claim Item No. 17.

#### Redirect Examination

## By Mr. Ruddiman:

RDQ. 321. I call your attention to pages 197, 198 and 199 of Plaintiff's Exhibit C, which contains, statements of costs pertaining to Claim Items 32,

33 and 34, respectively. Do you know who prepared the rates for equipment used in these statements? A. Yes, I do.

RDQ. 322. You prepared them? A. I did.

RDQ. 323. Will you tell the Court how you arrived at these rates? A. These were rates which I figured would be fair rates for the ownership expense of the equipment in question, plus maintenance and fuel and lubricants rates for the work which the statements covered.

Mr. Ruddiman: That is all.

Mr. Sweeney: No cross, Your Honor please.

Mr. Shields: Your Honor, that concludes the plaintiff's testimony at Denver at this time.

Our very important engineering witness was engaged in war work and we could not get him.

923 Our plan is to have him in Washington suiting your convenience shortly after you return from the trip West.

Commissioner Thompson: All right...

Mr. Sweeney: May the record show, Your Honor please, that the defendant is also placed in the situation where its witnesses and field engineers are now fighting the Japanese in the Pacific. We will get them as soon as the war is over, with the blessings of God.

Commissioner Thompson: I will try and keep the testimony going as quickly as I can.

Mr. Shields: I might say if Mr. Sweeney will prepare and submit to me what he expects to prove by these witnesses, we may agree on it.

Mr. Sweeney: If Your Honor please, I would be delighted to do that, and that is my practice and custom on small cases, but, obviously, in this case it would be impossible to do it, though I would be glad to.

Mr. Shields: Before the hearing adjourns, I wonder if the Court will fix some time limit how long we will have to hold available for examination our records for the F.B.I. men. We have to pay storage—

Mr. Swe ney: If Your Honor please, this is a half-million-dollar lawsuit and at this time—

Commissioner Thompson: How long do you think it will take your F.B.I. men?

924 Mr. Sweeney: That is difficult for me to say, because Your Honor can observe there is a great deal of accounting to be done.

Mr. Shields: We prepared our data in three weeks.

Mr. Sweeney: You prepared your data all in three weeks?

Mr. Shields: And examined the data and made our figures from the data.

(Colloquy.)

Commissioner Thompson: I may fix a limit when I get back, but I am not going to fix one now.

Mr. Sweeney: Thank you.

Mr. Shields: Mr. Commissioner, I think it should be a matter of record that Exhibit H, the file of Order for Changes, is not here at this time. We may have it in our records, and we will make every effort to duplicate it as quickly as possible.

Commissioner Thompson: Just make that as a matter of record.

(Whereupon, at the hour of 11:20 o'clock, a. m., the hearing was closed.)

925

C. E. Kasler, a witness produced on behalf of the plaintiffs, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

#### **Direct Examination**

### 'By Mr. Shields:

- Q. 1. Please state your name, age, occupation and residence. A. My name is C. E. Kasler; age 42; occupation civil engineer; address 291 Lister Avenue, Oakland, California.
- Q. 2. State whether or not you have an interest in the outcome of the pending litigation? A. I have no interest.
- Q.3. You state that you are a civil engineer. Will you please briefly tell the Court your educational background and practical training? A. I am a graduate engineer, University of Ohio, Athens, Ohio.
  - Q. 4. When did you graduate? A. In 1925.

- Q. 5. And where have you been employed since your graduation? A. I worked for 16 years as project engineer and construction engineer for the State of Missouri. The last 4½ years I have been employed as district manager for the Western Contracting Corporation, Sioux City, Iowa, with head-quarters at San Francisco.
- Q. 6. State whether or not, in connection with the employments you have enumerated, you 927 have had experience in matters of large earth-moving projects? A. I have.
- Q. 7. Does that include rock and similar material?

  A. Heavy grading excavations, foundations, rock excavations, classifications of excavations.
  - Q. 8. Embankments. A. Embankments.
- Q. 9. What about what we call heavy construction such as building bridges and what not? A. The largest bridge was 3,000 feet across the Lake of the Ozarks, 80 feet of water.
- Q. 10. What connection, if any, and over what periods, did you have with the work of building what is known as Vallecito Dam, by Martin Wunderlich Company, on the Pine River, Colorado? A. I spent two months at Vallecito Dam in 1938 and two weeks in 1941.
- Q. 11. In what convection were you employed?

  A. Checking quantities and the classification of materials.
- Q. 12. State whether or not, besides the time you were engaged at the site of the work, you put in any

over the period you mentioned? A. This
data was worked up at nights at Jefferson
City, Missouri, while I was working as construction engineer for the State of Missouri.

#### CLAIM 17.

#### **Direct Examination**

### By Mr. Shields:

Q. 174. Next I invite your attention to item of claim 17, cobblestone excavation and fill, statement of which appears in the petition, pages 14-16 of the printed record.

Have you made any study of the contract drawings as showing the location of the borrow pits contemplated to be used when the contract was made? A. I have.

- Q. 175. Contract drawing 191-D-45, being a part of Plaintiff's Exhibit A, shows what with reference to the location of borrow pits? A, It shows 961 borrow pit No. 1 on the right side of the river, borrow pit No. 2 on the left side of the river, and cobble borrow pit immediately downstream.
- Q. 176. From what? A. From the axis of the dam on the left side of the river.
- Q. 177. State, if you know, whether or not any cobbles were ever obtained from what is shown on

the drawing as the cobble borrow pit. A. There were no cobbles obtained from that borrow pit.

Mr. Sweeney: We object unless he saw and knows that of his own knowledge.

The Witness: I saw the dam location after the excavation. I saw that the cobble borrow pit was not disturbed.

Commissioner Evans: I think the testimony should be excluded.

Mr. Shields: He actually saw that this cobble pit area was never excavated at all.

Commissioner Evans: He didn't see the area before the work was done on it.

The Witness: I saw it after the dam was completed and it was never disturbed.

Mr. Shields: He knows no cobbles were taken from that area because it was never touched.

962 Mr. Sweeney: I understand the witness is testifying in support of the amounts plaintiff is claiming in this case. Defendant has made available to him data and he has made computations. He was only on the job from October 24, 1939 to December 18, 1939.

Commissioner Evans: The objection is overruled. The objection goes to the weight.

The Witness: Would you repeat the question?

### By Mr. Shields:

Q. 178. I am asking whether or not, to your knowledge, any cobbles were ever obtained from the area shown on the drawing as the cobble pit

area? A. No cobbles were obtained from that area.

Q. 179. Was that area ever disturbed during the progress of the work? A. It was never disturbed.

Q. 180. Where, if you know from your own observations, were cobbles necessary for the work procured?

Mr. Sweeney: Objection.

Mr. Shields: I asked if he knows.

Commissioner Evans: Mr. Shields, suppose, in view of these objections, you change your questions to ask first if he knows, and he can answer that yes or no, and then establish how he knows, and then we will get his testimony.

## By Mr. Shields:

Q. 180. When you were on the work, were cobbles being procured, and if so, from what source? A. They were being procured when I was first on the job in 1939 from the pit on the left side of the river, known as borrow pit No. 2.

Q. 181. How is that pit marked on the drawing? A. "Earth embankment borrow pit area".

Q. 182. And that is the pit you were talking about when you mentioned borrow pit No. 2? A. Yes.

Q. 183. What would you say as to the comparative distance the cobbles would have to be hauled from this pit labeled "earth embankment borrow pit" on the left side of the river, from which you have just said cobbles were being obtained in 1939 when you were there, to the embankment, with the distance cobbles would have to be hauled from the

area marked "cobble borrow pit" on the drawing to the embankment? A. If the distance is measured over the most feasible road, the pit actually used, from the center of mass of pit to center of mass of fill, is approximately 750 feet; whereas the distance from the cobble pit, shown as pit No. 3, from center of mass of pit to center of mass of fill, would be approximately 2,900 feet.

Q. 184. State whether, if you know, the area shown as "earth embankment borrow pit" on the drawing on the left side of the river was 964 actually limited to the dimension shown on the drawing, or was it extended for a greater distance upstream than as shown? A. The final drawings indicate that borrow pit No. 2 was extended upstream a large distance.

Q. 185. Do you know how much farther, as the pit was extended, the haul would be to the dam embankment as compared to the haul from the cobble pit shown on the drawing? Have you made a calculation of that? A. My original calculation was from the pit as actually constructed.

Q: 186. As actually constructed? A. Yes.

Q. 187. And not as shown on the contract drawing? A. That is correct.

Q. 188. If it should develop that the contractor is entitled to overhaul not for the most feasible distance but for the distance measured on a straight line from center of mass to center of mass, what would be figured for the difference in haul from

borrow pit No. 2 and from the cobble pit shown on the drawing? A. The haul from borrow pit No. 2 would be 4,700 feet.

Q. 189. In a straight line? A. Yes. And from cobble pit No. 3 the haul would be 1,600 feet in a straight line.

Q. 190. You state you were present when materials were being excavated from this pit No. 2 on the left side of the river from which cobbles were procured. What was your observation as to the character of material which was being obtained from this pit?

Mr. Sweeney: That is a question that goes directly to the question of whether this witness saw the material actually being excavated.

Mr. Shields: I asked if he was there when it was being excavated.

## By Commissioner Evans:

Q. 191. You were there? A. Yes.

Commissioner Evans: All right. Go ahead.

A. The material was full of large cobbles, ranging from 2½ inches in diameter to 12 inches or better.

### By Mr. Shields:

Q. 192. At that time, in the late autumn of 1939, how were the large stones being separated from the earth material in borrow pit No. 2? A. They were being separated by two rake dozers on the fill.

Q. 193. What is a rake dozer? A. A bulldozer in which slots have been cut to permit the earth to pass through the blade.

966 Q. 194. Do you mean that the materials as excavated would be dumped on the embankment and then the rake dozers would separate the stones from the earth? A. That is correct.

Q. 195. There is mention in other parts of the testimony about a screening plant. Was that screening plant in operation at that time? A. As I remember it, the screening plant was not used on these particular cobbles in 1939; that is, the cobbles from this particular pit.

Q. 196. Would or not a screening plant have operated in much the same fashion in separating stones from earth? A. The result would have been the same.

Mr. Shields: Incidentally, this Plaintiff's Exhibit 1-A, being the moving pictures taken while the work was in progress, about one-half of the film is an illustration of trucks dumping this material in 1939 into the fill and these dozers operating to separate the stones from the earth, so Your Honor, when you see it, will get a very good idea how they operated.

### By Mr. Shields:

Q. 197. There is in evidence as Plaintiff's Exhibit 17-E a list of equipment allegedly used by the contractor in doing this work from pit No. 2 on the left side of the river, and of the rates of rental

alleged to be reasonable for the use of such equipment while so employed. I will ask you 967 whether you have examined this exhibit and what would you have to say as to whether or not the hourly rates fixed in the final column of this exhibit would accord with your observation and experience in use of similar equipment elsewhere?

Mr. Sweeney: We object. This witness has not been qualified to testify whether these hourly rates as claimed here would be fair and equitable, or whether the monthly rates applied by the contracting officer should be sustained.

Mr. Shields: I will reserve the question and ask this one:

Q. 198. I will ask you whether or not, over the period you were employed as project engineer and construction engineer for the State of Missouri, you had constant experience in using equipment such as is listed in Plaintiff's Exhibit 17-E? A. I did.

Q. 199. And whether or not you have had experience in fixing rates for such equipment? A. I have.

Q. 200. And whether or not, in the road work-carried on by the State of Missouri, it was necessary to use equipment of the same character as used in the building of this dam? A. It was.

Q. 201. Based on that experience, would you be in position to express an opinion as to the reasonableness of the hourly rates fixed in Plain968 tiff's Exhibit 17-E? A. I am.

Q. 202. I will ask you if the rates so listed are reasonable, and give your reasons why?

Mr. Sweeney: We renew our objection. He has not indicated that conditions on this job and on the other jobs he is testifying about are comparable. There would have to be a reasonable similarity, I should think.

Commissioner Evans: You will have to carry on your examination some further to qualify him. Ask if he was familiar with equipment rental rates at that time and if the equipment is the same.

Mr. Shields: I have asked the latter. I have not asked as to time.

# By Mr. Shields:

Q. 203. What would you say as to whether or not, at or about that time or immediately prior to or immediately after that time, you had experience in rental equipment of the same character? A. During the last ten years I was with the Highway Department of the State of Missouri I was a division construction engineer. At times it was not possible to get agreed prices from contractors, in which cases the work was done on a cost-plus basis. The same rates, the AGC rates, were used on this cost-plus basis. The type of equipment was identical to the type of equipment used at Vallecito Dam.

969 Commissi ner Evans: All right. He may answer.

#### By Mr. Shields:

Q. 204. Was it during 1939 and 1940 that you had experience of this character? A. Between 1930 and 1939.

Q. 205. Now, coming back to my question, what would you say as to the reasonableness of the hourly rates shown by Plaintiffs' Exhibit 17-E? A. I have examined Plaintiffs' Exhibit 17-E, and it is my opinion that the rates asked are reasonable, inasmuch as they include the equipment ownership rate specified in the AGC book, the Bureau of Reclamation Fuel Oil and Grease Rates, and a maintenance rate that includes the servicing of all equipment involved, also supplies, minor repair parts, etc.

Q. 206. I will ask you whether, if you know, it would be more or less expensive to operate in a high altitude such as here involved than in a low altitude such as you were accustomed to in Missouri work? A. It has been our experience that it costs much more to operate equipment in higher altitudes, the efficiency being cut down as much as 25 per cent, depending, of course, on the elevation at which the work is done.

Mr. Shields: That is all on 17.

(Short recess.)

#### CLAIM 17.

#### **Cross Examination**

#### By Mr. Sweeney:

XQ. 207. Mr. Kasler, please, you told His Honor that you made a study of the contract drawings, in reference to one of the first questions by Brother Shields. Tell His Honor when you made this study? A. The original contract drawings?

XQ. 208. This study that you testified about, that you made a study of the contract drawings; when did you do that?

Mr. Shields: I didn't ask him whether he had studied the contract drawings. I asked if he had seen them.

Mr. Sweeney: I have a note that he asked whether the witness studied them.

Commissioner Evans: The witness can answer the question.

A. I have studied them from time to time but I don't remember when I first studied them.

#### By Mr. Sweeney:

XQ. 209. Regarding the computation you made for plaintiff in connection with this Claim 17, when did you do that? A. I made that computation yesterday.

XQ. 210. When did you make that, please? A. Yesterday.

XQ. 211. This computation that you have testified about, you made yesterday? A. That is 971 right.

XQ. 212. With regard to the amount of money that the plaintiff is claiming under this item, of \$181,721.10, did you participate in the preparation of that computation? A. No, I did not.

XQ. 213. You didn't have anything to do with that? A. No.

XQ. 214. You testified you were on the job and you saw these cobbles being excavated from this particular pit. Were you referring to pit No. 1? A. No. I was referring to pit No. 2.

XQ. 215. It is a fact that a considerable quantity of cobbles were obtained from that pit during the time the excavation work was going on?

Mr. Shields: What pit?

Mr. Sweeney: The pit he has just mentioned, No. 2.

A. It is my understanding that all the cobbles that did not come from required excavation came from pit No. 2.

By Mr. Sweeney:

XQ:216. From pit No. 2? A. Yes.

XQ 217. Weren't you questioned regarding pit No. 3? A. Pit No. 3 I saw after the dam had been completed, and it had not been disturbed.

XQ. 218. You were testifying as to your of interpretation of the drawing, and you testi-

fied that the ground surface was not disturbed at that particular location? A. At pit No. 3 it was not disturbed.

XQ. 219. Do you know as a fact that practically all the cobbles required on this job were taken from pit No. 2? A. I know all the cobbles except what came out of required excavation came from pit No. 2.

XQ. 220. Isn't it a fact if the contractor had not used those cobbles they would have been wasted and he would have been subjected to the expense of stripping and preparing this other cobble area? A. Not necessarily. The stripping was a pay item.

XQ. 221. But he would have had to clear it and do whatever work was involved? A. As I remember the pit, there was very little clearing required.

XQ. 222. It is quite an open area out there, isn't it? A. It isn't densely forested.

XQ. 223. Except on the higher elevations, where it is quite heavily wooded. He would have had to build an additional roadway, wouldn't he? A. That would have been a small item.

XQ. 224. A small item. You testified, in substance, that the separating or screening plant was not in operation when you were there in the fall

of 1939? A. I said it was not used on pit 973 No. 2.

XQ. 225. He was using the rake dozers? c A. On the cobbles from pit No. 2, yes.

XQ. 226. That wasn't as efficient a means of doing that work as would have resulted from the

use of the screening plant, was it? A. I have not studied the cost. I don't know.

XQ. 227. Do you know whether or not the contractor experienced considerable trouble with his screening plant? A. At the time I was on the job nothing was said about trouble with the screening plant.

XQ. 228. It just was not working so far as you observed? A. I saw the plant in operation.

XQ. 229. Oh, it was in operation. Where was it at that time? A. It was located, as I remember it, downstream from the dam axis.

XQ. 230. In this borrow pit No. 2? A. No, sir.

XQ. 231. It was located somewhere else? A. The plant was stationary. The material was hauled to the plant.

XQ. 232. The material was hauled from borrow pit No. 2 to the plant? A. No. The material 974 from borrow pit No. Sowas separated with rake dozers in 1939. The screening plant was used for other operations.

XQ. 233. Just limit it to this Claim 17. A. The screening plant was not used in 1939 to separate material from pit No. 2.

XQ. 234. You testified that the results from using the screening plant and from using the rake dozers were about the same. You don't mean you could accomplish this work as efficiently by using rake dozers as by using the screening plant? A. The results must have been satisfactory or the Government would not have permitted it.

XQ. 235. You have been called as an expert. On the other jobs you have been on, did they use a screening plant rather than rake dozers? A. We have used both.

XQ. 236. But in this instance, where they were encountering a large number of cobblestones, would you have used a screening plant? A. I understand they used it for some of the operations.

XQ. 237. You were not there? A. No.

XQ. 238. You don't know? A. No.

975 XQ. 239. In respect to rates, you made reference to AGC rates. Do you know that Bureau of Reclamation rates are also based on AGC rates? A. I understand they are.

XQ. 240. So that the only difference is that the plaintiff is claiming compensation based on an hourly rate and the contracting officer made an adjustment based on use of the equipment for a monthly period; is that not the difference, if you know? A. I have studied the contractor's method of computing the rates and it is my opinion that his method is proper for this particular job.

XQ. 241. Tell His Honor if it isn't a fact that this work, so far as you know, was carried on continuously; that is, it was a seasonal job; it was carried on in all seasons, was it not? Δ. As far as weather would permit.

XQ. 242. So far as weather conditions were favorable, the work progressed continuously? A. That is my understanding.

XQ. 243. You don't mean to say, as an expert, you would apply the same rates in computing a job of that kind as in computing a job where you did the work in a week or two weeks and were subjected to the payment of high rates in getting the equipment on the job? A. We have always

equipment on the job? A. We have always 976 computed rates from the time the machine arrived on the job until it left the job, or, in this particular instance, from the time the machine was assigned to that part of the work, and when it

was idle on Sundays the rate went on.

XQ. 244. That is in conformity with the AGC formula? A. That is the method of computing rates.

XQ. 245. Assuming you were asked to do a comparatively small earth-moving job where the work could be completed in a week or ten days, and assuming also that you were contracting to do a job that might be carried on for four working seasons or four years, would you charge the same rental rate for both jobs? A: I would charge from the time it arrived on the job until it left.

XQ. 246. The question is whether or not you would use the same rental rate for both jobs. Isn't it a fact that for a small job you would charge an hourly rate, whereas for a large job you would charge a monthly rate? A. No; whether a small or a large job you would still use this book as a guide.

XQ. 247. You testified it was more expensive to operate this equipment in a high altitude. Was the altitude where this work was done so high that it

would have affected materially the efficiency of the operation of the equipment on the job? A. 977 That is correct.

XQ. 248. It was about 7200 feet, was it not? A. Equipment companies claim from 2 to 3 per cent loss of efficiency per 1000 feet of elevation. This elevation was 7200 feet, approximately.

Weather conditions were comparatively favorable, weren't they, when you could work along late in December? You testified you were on the job until December 18, 1939. A. I-wouldn't want to build a dam at a higher altitude than this, because it would take special equipment.

XQ. 250. If you were operating in the Rockies, 10,000 or 12,000 feet, that would be much less efficient than operating at this altitude? A. I think the loss of efficiency would be about 2 per cent per 1000 feet.

XQ. 251. And that is the only variation, is it? That is all.

## 1017 Direct Examination

#### By Mr. Sweeney:

- Q. 1. State your full name. A. Jean R. Walton.
- Q. 2. Your address? A. Kingman, Arizona.
- Q. 3. Your present position? A. I am field engineer on the Davis Dam.

- Q. 4. Where is that located, please? A. Davis Dam is on the Colorado River, between the states of Arizona and Nevada, approximately 60 miles, below Boulder Dam.
- Q. 5. Please tell us briefly your educational background. A. I have graduated from high school and have a degree in electrical engineering from the University of New Mexico, graduated there in 1933.
- Q. 6. Now, will you indicate, please, in some detail, your practical experience? A. Previous to the

time of going to University, I was out of 1018 school for about approximately six years

from the time I finished high school 'til I-entered University. During that time I was working for the Santa Fe Railroad. I served a four-year apprenticeship as-machinist for Santa Fe Railroad. Worked one year as machinist at San Bernardino, California. Worked approximately another year in the signal department, installed block signals. Following that I went back to University. I was then in school from 1929 to June of 1933.

Very shortly after graduating from University, possibly a couple of months later, I went to work for the United States Indian Irrigation Service at Albuquerque, New Mexico. I worked for the United States Indian Irrigation Service on small irrigation and power projects up until 1936, about September; I believe it was a little later than that, probably latter part of October, I was transferred

to the Bureau of Reclamation, and I have been employed by the Bureau of Reclamation mostly on Valecito Dam up until the time I went into the Army.

Q. 7. When was that, please? A. I went into the Army the latter part of July. I believe my service

started on the first of August, 1942.

Q. 8. And released sometime in 1946? A. My terminal leave April 27, 1946.

## 1049 By Mr. Sweeney:

Q. 75. I show you a document marked Defendant's Exhibit C.

(Whereupon, a paper was marked for identification Defendant's Exhibit C.)

Q. 76. (Continuing) Examine it, please, and tell his Honor what it is. Now, tell his Honor, please, what this drawing is and describe it in some detail. A. Exhibit C is a contact print of drawing 191-D-45, which is contained in the specification 705. It forms a part of the contract:

Q. 77. In other words, it forms a part of the contract? A. That's right. This drawing indicates the general location of earth embankment borrow pits and cobble borrow pit area, also general location of the dam, and has the logs of the test pits and

auger holes in the borrow pit and cobble bor-

1050 row areas, shown thereon.

Q. 78. Now, by reference to that drawing, will you indicate to His Honor the location of what

was called earth borrow pit No. 1? A. Earth—which is later referred to as earth embankment borrow pit No. 1, is the area indicated on the right side of the river. In other words, the river is flowing from left to right. It is in the lower portion of the main drawing.

Q. 79. For the record, will you outline that in pencil, please?

Mr. Sweeney: For the record, the witness has now outlined borrow pit No. 1 and has marked it for the record as borrow pit 1 and his initials.

#### By Mr. Sweeney:

Q. 80. Now, at this point, will you indicate to His Honor the general location of what later became borrow pit No. 2? A. Borrow pit No. 2 is the borrow pit indicated on the left side of the river.

Q. 81. Will you outline that, please, and mark it borrow pit No. 2?

Commissioner Evans: Isn't it already outlined?
The Witness: Correct.

Commissioner Evans: And isn't that true of No.

The Witness: As outlined in the specifica-1051 tion drawings.

Commissioner Evans: Isn't that true also of No. 1?

Mr. Sweeney: All right. That was already shown, the location of borrow pit No. 1. Please mark the location of borrow pit 2 and mark your initials thereon.

For the record, your Honor please, my brother on the opposite side is questioning the designation of the borrow pits on the drawing; and for the purposes of identification we want the record to show the exact location of borrow pit 2. We have asked that it be so marked. Those comments, your Honor please, apply with respect to borrow pit No. 1.

#### By Mr. Sweeney:

Q. 82. By reference to Defendant's Exhibit C, will you please indicate to His Honor and outline in pencil the location of the cobble borrow pit area.

A. The cobble borrow pit area is marked on the plan. It is a dotted line downstream from this area.

Commissioner Evans: It bears the marking

"cobble pit area"?

The Witness: That is right.

## By Mr. Shields:

Q. 83. While we are on that, was the cobble pit ever used for any purpose? A. There was some earth materials taken out of there in small quantity

in the latter part of 1941 to complete the 1052 embankment.

## By Mr. Sweeney:

Q. 84. And will you tell His Honor, please, the purpose of that and why it was necessary. A. The contractor had stockpiled sufficient material in a ramp at the left abutment of the dam to complete

the earth embankment of the dam. They were so late and slow in getting started with their operations in 1941 that the reservoir elevation came up and flooded out a portion of this material. It, therefore, became necessary to go to some other location to get material to keep the dam in earth and cobble.

In order to do this the only spot available was a cobble borrow pit, approximately five or six thousand yards taken from this pit.

Q. 85. To the best of your knowledge, Mr. Walton, was any cobble taken from that pit? A. An effort was made to leave all the rock and stones in the pit, because the rock was not needed. We had sufficient rock already on the downstream slope of the dam to keep it; but there was some rock, and what there was was removed in accordance with the specifications before it was rolled, and these were kicked over into the cobble fill.

Mr. Sweeney: That testimony was a little out of order, but it was deemed necessary by a question injected by plaintiff.

1061 Commissioner Evans: I understand the exhibit is offered for a limited purpose. The objection is overruled and the document is received.

(The map above referred to, marked Defendant's Exhibit C, is filed in connection with this case.)

1068 Mr. Sweeney: Your Honor, before offering the documents in connection with the general case, there are just a few questions I wish to ask Mr. Walton.

#### Direct Examination

## By Mr. Sweeney:

Q. 120. Mr. Walton, I believe I omitted to ask you just what duties you performed during this whole job? A. The construction of Vallecito Dam?

Q. 121. Yes. A. I was field engineer and chief

earth work inspector.

Q. 122. After the job was completed in 1941, what did you do in connection with this case after that time? A. When the job at Vallecito was completed, I was transferred to the Denver office and was in the concrete dam design section. Along about possibly July or a little earlier than that, possibly in June, 1942, I spent possibly a month or a little longer in preparing memorandums and data and

information relative to the various claims
the contractor had submitted, to be used in
the preparation of findings of fact by the

contracting officer.

Q. 123. Following that period you went into the Service sometime? A. I went into the Service August 4, 1942.

Q. 124. Now, with respect to sometime in 1946 and following your release from the Service in 1946, what did you do in connection with this case and when? A. When I returned to work with the

Bureau of Reclamation the 18th of February, 1946, I was assigned to duties here in the Denver office examining all the files and records and preparing data for the defense of this case. I was here in Denver until approximately the middle of May, until I was transferred to Davis Dam where I am at the present time.

Q. 125. During that time you selected the papers and so forth, and did whatever was necessary to aid government counsel in the defense of this suit? A. Examined all the government records and photographs and drawings in connection with the construction of Vallecito Dam, and selected anything that pertained in any way to various items of claim; and I assembled this data.

## 1073 By Mr. Sweeney:

Q. 132. We show you a document marked Defendant's Exhibit G.

(Whereupon, a book was marked for identification, Defendant's Exhibit G.)

1074 Q. 133. (Continuing) Tell his Honor what it is, please. A. Exhibit G is an equipment rental schedule prepared by the Denver office of the Bureau of Reclamation, dated September 21, 1937. It contains various items of equipment and rental rates as computed in the Denver office.

Q. 134. Tell his Honor, please, what is the purpose of that document? What is it used for in connection with the work on this job? A. This docu-

ment submitted to all field offices and used as a basis to establish equitable rental rates and orders for changes where the rental equipment is involved.

Mr. Sweeney: This document, if your Honor please, is offered as Defendant's Exhibit G for the purpose of showing the rental rates that the defendant's representatives and engineers on the job were required to use with extra work changes.

Mr. Shields: Plaintiff objects to this document as not shown to have been in effect when the work went on. It is a subsequent rental rate promulgated by the Bureau.

By Commissioner Evans:

Q. 135. What is the date of it? A. 1937.

Mr. Sweeney: The contract, your Honor, is dated March 14, 1918.

Commissioner Evans: What?

Mr. Sweeney: March 14, 1918; and these are promulgated in 1937.

Commissioner Evans: You are off 20 years.

Mr. Sweeney: Pardon me. 1938.

Commissioner Evans: I don't understand your objection on the date.

Mr. Shields: My objection is that there was a subsequent rental schedule that did apply.

Commissioner Evans: Oh, there was a later one?
Mr. Shields: Yes.

By Mr. Sweeney:

Q. 136. Tell his Honor, please, at the start of this job, when what you have teld us the work began, in

April, 1938, in connection with which orders and extra work and claims in connection therewith, just what, if anything, did this publication have to do with such matters? A. This rental schedule was submitted to the field offices. I can't say the exact date we received it at Vallecito, but this was later revised and supplemented and there is a later dated schedule that includes the data that is in here plus an enlargement.

## By Mr. Shields:

Q. 137. Do you know whether a copy of this was furnished to this contractor or whether he ever had any knowledge of its existence? A I don't 1076 know that these were furnished to any contractors. They were for guides for Bureau of Reclamation field forces.

#### By Mr. Sweeney:

Q. 138. In this connection, we show you a copy of Plair s Exhibit 3. Is that the revised publication of the rental rates you refer to? A. Yes, this is the later, enlarged copy.

Q. 139. That is, it is a revision of the defendant's exhibit—A. That's right.

Q. 140.—G, for identification, that is being offered? A. That is correct. I thought there was a reference in here, but I guess there isn't.

Pardon me. It is stated right on here. It says this schedule supercedes the schedule of this office under date of September 21, 1937.

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Q. 141. And is the publication that you have just referred to in 1937 Defendant's Exhibit G? A. It is.

Q: 142. —for identification? A. It is the equipment rental schedule dated September 21, 1937, is Defendant's Exhibit G.

Q. 143. Now, with respect to any claim for additional compensation in connection with al1077 leged extra work prior to the publication of the revised equipment rates, dated January 2, 1940, just what rates would you use on that job in connection with the work under the contract?

Mr. Shields: I object. Not what he would use.

Mr. Sweeney: Your Honor please, we are trying to lay the groundwork of what was used. Obviously, the contractor couldn't have used that.

Commissioner Evans: I will overrule the objection until—

The Witness: This would have formed the basis for any rentals that were worked up in the case. That is what was figured to be a reasonable rental for equipment.

#### By Mr. Sweeney:

- Q. 144. Who would do this figuring on the job? A. Well, it could have been any of the engineers on the job. As a general rule at Vallecito, I think I handled most of it.
- Q. 144. And these are the rental rates? A. Until the schedule came out.
- Q. 145. Now, with respect to Plaintiff's Exhibit 3, do you know of your own personal knowledge

whether that was officially submitted to the contractor? A. Not to my knowledge. I don't think it o was. In fact, I don't think it was put out to be sub-

mitted to the contractor. It was put out for 1078 the guidance of the employees of the Bureau of Reclamation in figuring a reasonable rental allowance.

Q. 146. But in case a contractor asked for it, it would be given to him? Is that correct? A. He could observe anything that was in there. I think we had one copy of that on the job

#### By Commissioner Evans:

Q. 147. Was the same thing true of the 1937 schedule? It could be available on request? A. Oh, yes. If they wanted, they could see it was a reasonable rental rate.

#### By Mr. Sweeney:

Q. 148. Mr. Walton, please, with respect to the various items of claim in this suit, other than item No. 17, to which we understand the so-called 1940 rates applied, now, just what rental rates would have been used in connection with the various other claims other than 17? A. Well, any date submitted previous to 17 or previous to the date the revision, this copy would have been used.

Q. 149. And that is Defendant's Exhibit G, the 1937 rates? A. That's right.

Mr. Sweeney: This document, your Honor please, is now offered as Defendant's Exhibit G. The pur-

pose is to show to the Court the rental rates defendants were required to use in connection with 1079 any items of claim other than No. 17.

Mr. Shields: Plaintiff objects to it on the double ground that it is in duplication of an exhibit alread in evidence; that the contractor never knew of the existence of this Defendant's Exhibit G until today, never had it applied to any claim to his knowledge.

Commissioner Evans: Off the record a moment.

(Whereupon, there was unrecorded discussion.)

Commissioner Evans: I should like to have on the record a statement by you as to the purpose. Is that on the record?

Mr. Sweeney: That is on the record, and then I was going to call attention to the provisions of the specification in which the contractor was to make a reasonable allowance, and then how that was reasonable.

Commissioner Evans: All right. Let the record show the objection is overruled.

Mr. Sweeney: Now, your Honor please, in connection with that, may we show that under the terms of Paragraph 10 of the specifications of record 50 relating to extras, the contracting officer is to make a reasonable allowance for the use of the contractor's plant and equipment where required, to be agreed upon in writing before the work is begun, but in no case is it to include allow-

1080 ance for office expenses, general superintendent, or other expenses.

The document which we are now offering, if your Honor please, as Defendant's Exhibit G, is the equipment rental schedule in effect September 21, 1937, by the Bureau of Reclamation. And, in the very first page thereof it states, quote, "In preparing extra work orders under construction contracts on the basis of payment at cost plus, it is a requirement, set out in Paragraph 10 of the specifications, that reasonable allowances be made for the use of the necessary equipment and that such allowances must be agreed to in advance and should be stated in the order."

I don't believe it is necessary to read further. Reference is made to the Associated General Contractors of America, in quotes, "equipment ownership expense," dated 1930.

Commissioner Evans: For my further information, which one of these claims involved which orders?

Mr. Sweeney: Practically all of these claims involve extra change orders.

Commissioner Evans: Yes.

#### By Mr. Sweeney:

Q. 150. Tell his Honor, please, in connection with the claims presented under this suit, just in what manner would you determine the fairness or equitableness—

Mr. Shields: Oh, I don't think Mr.

1081 Sweeney will ever get through. This man is
not the contracting officer.

Commissioner Evans: I think that is right.

Mr. Sweeney: Before the contracting officer could do anything, the witness on the stand, employed by the government, is the one in the first instance to make that, and he submitted that to the contracting officer.

Commissioner Evans: All right.

By Mr. Sweeney:

Q. 151. First, tell his Honor, please, what you did with the claims presented in this suit, Mr. Walton. A. Well, any claims submitted by the contractor that involved equipment rental, in other words, an allowance for his equipment, we merely took the schedule as furnished by the contracting officer and made a comparison of what was figured based on this schedule, what was an equitable rental, and showed that in comparison with what the contractor was submitting in his statement of claims. That was put up to the contracting officer. The basis of that was this equipment rental schedule.

Q. 152. Now, before the contracting officer made any determination on this claim or any claim, what did he do?

Mr. Shields: Oh, the contracting officer will best testify about what he did.

Mr. Sweeney: The contracting officer is not here, your Honor. He has retired, too.

# 1082 By Commissioner Evans:

Q. 153. Do you know the procedure of the contracting officer? A. Pardon<sub>e</sub>me?

Q. 154. Do you know those procedures? A. If a contractor presents a claim?

Q. 155. Yes. A. Yes.

Commissioner Evans: All right. The objection is overruled.

The Witness: The contracting officer of the claim would be submitted to the contracting officer's representative on the project, and the construction engine would make an analysis of the claim submitted and submit it to the contracting officer with his comments and recommendations.

## By Mr. Sweeney:

Q. 156. Tell his Honor was that done in connection with each of the claims in this suit including 17? A. I think it was done in connection with all claims in this suit, and there is a mass of correspondence relative to conferences that were held in an effort to reach an equitable adjustment in each item claimed.

Q. 157. Now, with respect to the procedure you have just told his Honor about, and in connection with each of the claims presented, what did you

yourself have to do in connection with them?

1083 A. As one of the field engineers I was directly in contact with the job. It was usually my duty in case a claim was submitted by the contraction.

tor to prepare a memorandum for the construction engineer stating that all the facts I knew relative to the contractor's claim. In many of these I prepared a schedule based on the hours shown, the various equipment hours of operation, what the claim would have amounted to based on Bureau of Reclamation rental rates rather than rates the contractor had used.

Q. 158. And did you do that in connection with each of the claims in this suit that involved the application of such rental rates? A. I did in, I would say, in most of these; possibly in all of them.

Q. 159. Well, so far as they involved the application of rental rates, Mr. Walton? A. In most cases that is right, I did.

Mr. Sweeney: This document is now offered, your Honor please.

Mr. Shields: You have offered it, and it has been admitted sometime ago.

Commissioner Evans: Defendant's Exhibit G was admitted back somewhere.

(Whereupon, a paper was marked for identification Defendant's Exhibit H.)

1090 (Whereupen, a paper was marked for identification, Defendant's Exhibit K.)

Mr. Sweeney: Your Honor please, we offer as Defendant's Exhibit K a certified copy of a letter dated February 22, 1943, from the chief engineer,

that is, the contracting officer in Denver, to the Commissioner regarding the contractor's appeal from the contracting officer's findings of fact

1091 in this case.

Mr. Shields: Same objection as to the previous exhibit. It is an interdepartmental communication, never brought to the attention of the plaintiff.

Mr. Sweeney: And we cite the McCoy ease again. Business just couldn't be done if the contracting officer personally had to do everything.

Commissioner Evans: Who is this from? Is it & from the contracting officer?

Mr. Sweeney: This is from the contracting officer, if your Honor please, to the Commissioner in Washington explaining what he has done in connection with certain items in this defendant's exhibit. I will show at to you. (Handing paper to Commissioner Evans.)

Commissioner Evans: Who is the contracting officer, please?

Mr. Sweeney: Mr. Harper, if your Honor please. Commissioner Evans: What is his official title?

Mr. Shields: Harper was the contracting officer. The Commissioner didn't have any more to do with it than I had, if your Honor please.

Commissioner Evans: If you want to withhold that and bring in a copy of this McCoy case in the morning, I will reserve ruling.

Mr. Sweeney: An right.

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Commissioner Evans: Let the offer re-1092 main, but I shall reserve ruling until in the morning.

Mr. Sweeney: Yes, sir. And I will bring in the McCoy case. Off the record, please.

(Whereupon, there was unrecorded discussion.)

(Whereupon, a paper was marked for identification, Defendant's Exhibit L.)

Mr. Sweeney: We next offer in evidence, your Honor please, a document marked Defendant's Exhibit L, which is a letter dated March 13, 1942. It is a copy of a letter, and it is signed with the original signature of the plaintiff forwarding his final estimate together with the release executed by him wherein he reserves his rights. We are just putting in this letter to show the date the contractor made his final estimate.

Mr. Shields: No objection, except it is already in evidence.

Commissioner Evans: So received,

(The letter referred to, marked Defendant's Exhibit L, is filed in connection with this case.)

Mr. Sweeney: We next offer in evidence, your Honor please, a document marked Defendant's Exhibit M, purporting to be a copy of a letter dated July, 1942, from the contracting officer to the plaintiff. It is asking for some supporting data in connection with the claims.

Mr. Shields: No objection, except it is 1093 already in evidence.

Commissioner Evans: So received.

(The letter referred to, marked Defendant's Exhibit M, is filed in connection with this case.)

(Whereupon, a document was marked for identification Defendant's Exhibit N.)

Mr. Sweeney: We next offer in evidence, your Honor please, a document marked Defendant's Exhibit N, which is a certified copy of all of the vouchers and related papers including the final release and the acceptance notice by the plaintiff. It is from the official files of the general accounting office. It consists of 156 pages.

Mr. Shields: It is already in evidence as Plaintiff's Exhibit F.

Mr. Sweeney: It is offered, your Honor please, in order that there may be a complete record.

Commissioner Evans: Are you entering an objection?

Mr. Shields: No objection, except it is already in evidence.

Commissioner Evans: Very well. Let it be received subject to the provision that it be checked and the record clarified.

(The document referred to, marked Defendant's Exhibit N, is filed in connection with this case.)

I note on the record that the contracting officer that is the successor to Mr. Harper, whose name is Mr. Young, the chief engineer in Denver, was in Washington yesterday and he is today. We understand that he will return Friday morning. When he does we will call him as one of our main witnesses. In fact, it was our intention to call him as our main witness but it was impossible for us to do that yesterday. That is Mr. Young, the contracting officer.

If your Honor please, before we proceed to offer proofs in defense of Item No. 1, I believe there are just a few preliminary questions that I should touch upon this morning.

One of them relates to the issue regarding the admissibility of evidence, all communications and

reports that were made during the progress of the job. I believe yesterday we mentioned

the McCoy case in 193 U. S. at Page 593, which supports the rule that official reports and certificates made contemporaneously with the facts stated, and in the regular course of official duty, by an officer having personal knowledge of them, are admissible for the purpose of proving such facts.

And in that connection we wish to call your Honor's attention to the case of Charles Rosser vs. The United States, in 46 Court of Claims, 190 to 196, and, only so far as pertinent, the Justice speaking for the Court said: "The evidence in the record consists entirely of official letters, communications, orders, and reports, competent as held in United

States vs. McCoy, 193 U. S. 593. The findings of the Court are predicated thereon."

We simply wanted to call your Honor's attention, please, to the fact that in connection with each and every one of the claims that are involved in the suit such communications and reports will be offered by the defendant, and we respectfully ask your Honor to consider our motion to offer such records in the light of these decisions.

Mr. Shields: Your Honor, I have not read the eases my friend refers to lately, but it has never been held, for instance, say: Mr. Wunderlich's superintendent sits down today and writes him a

letter—that that would be admissible as 1118 proving facts if the superintendent were available to testify as to what were the facts.

Now, my friend wants to put in a lot of letters that the man on the job writes his Chief in Denver, in exactly the same fashion. The man on the job is or show be available to testify as to the facts. We certainly are not bound by statements in a letter that never came to our attention. We had no means of refuting, disputing, or questioning it. So we object to any letter of that kind.

Moreover, they are not contemporaneous with the facts as they happened. Some of them were a year or two later.

(Further argument and discussion was had off the record.)

(Short recess.)

Commissioner Evans: Let the record show with respect to the document offered by defendant as its exhibit K, on which ruling was reserved, that the objection is sustained, inasmuch as I do not believe it admissible under this statute.

(Defendant's Exhibit K, heretofore marked for identification is filed in connection with this case.)

Mr. Sweeney: And may the record, if your Honor please, note an exception, on the ground, if your Honor please, that this evidences the action of the contracting officer and it is submitted to the Commissioner for transmission to the head of the department on which the administrative findings were made which are in evidence as Plaintiff's Exhibit E.

# 1169 By Mr. Sweeney:

Q. 303. Now, referring, please, to the drawing attached to Defendant's Exhibit F, marked 191-D-45, you have mentioned to his Honor that materials were taken from borrow pit No. 2. Now, will you mark on this drawing, please, just in rough outline, the location of borrow pit No. 2? A. You mean the materials that were taken out later?

Q. 304. At a later date? A. After these claims?

Q. 305. Just show his Honor the location of borrow pit No. 2 on the drawing, made a part of the

specifications. A. The portion of earth em-1170 bankment borrow pit No. 2 as shown on drawing 191-D-45 from which Zone 1 and 3 materials were taken, from the left hand side of the river after this material that is involved in Claim No. 1 was excavated, to which I have referred—I will roughly indicate that with a circle and mark it "Pit 2."

Q. 306. Circle it and mark it "Pit 2," the portion of Pit 2. A. This is merely a small part of pit No. 2 from which this excavation came in 1939.

(Conference off the record.)

Commissioner Evans: Let the witness state what he has done. A. I have circled an area on the left side of the Pine River and marked it "Excavation from borrow pit No. 2 in 1939," and initialed it. This roughly outlines the portion of borrow pit No. 2 shown on the specification drawing as "earth embankment borrow pit area," from which this excavation was taken in the latter part of 1939.

## By Mr. Sweeney:

Q. 307. And will you enter on this drawing, please, the location of borrow pit No. 1 that has been discussed and mark it "No. 1"? A. Borrow pit No. 1 as I have discussed it covers everything on the right hand side of the river as I am speak-

ing of it now. I have circled in a large area 1171 here in pen, noted on here "Earth borrow pit No. 1" which is on the right de of the Pine River, and initialed it.

Q. 308. Tell the Court, please, if the outlines of borrow pit No. 2 are also shown on this same drawing as it was made a part of the original specifications. A. Shown on drawing 191-D-45 specification drawing is a dashed line outlining a borrow pit on the right side of the river and earth embankment borrow pit on the right side of the river and an earth embankment borrow pit area on the left side of the river. These dashed lines indicate roughly the proposed area.

Q. 309. Just mark No. 2 area on the drawing, please, so that the Court will know its location. A. Actually area No. 2 was taken from a much larger area than what is indicated right here.

Q. 310. Indicate just so the Court will have a clear picture of where borrow pit No. 2 was. A. I have indicated on drawing 191-D-45 with an inked dashed line the approximate area covered by earth borrow pit No. 2. I have labeled this "Earth borrow pit No. 2." and it is initialed.

1242 Herman F. Bahmeier, a witness produced on behalf of the defendant, having been first duly sworn by said Commissioner, was examined, and in answer to interrogatories testified as follows:

Direct Examination on CLAIM No. 1

## By Mr. Sweeney:

- Q. 1. State your name, please, Mr. Bahmeier. A. Herman F. Bahmeier.
  - Q. 2. And your address? A. Kingman, Arizona.

Q. 3. You are employed by the United States?

Q. 4. Tell his Honor, please, what your present position is. A. My present position is construction engineer at the Davis Dam project.

Q. 5. And what is the Davis Dam project, please? A. Briefly, the Davis Dam project is a power dam, at least an earth and rockfilled dam, being built on the Colorado River including a large power plant, the location of which is about 67 miles downstream from Boulder Dam.

Q. 6. How does that job compare with the job involved in this suit? A. On the basis of quantities, the embankment, the earth and rock fill, would be

about a million yards larger than Vallecito 1243 Dam. In addition to that, there is a large

power plant which will contain in the neighborhood of about a half a million cubic yards.

Q. 7. As regards price of moving-

Mr. Shields: I object to this as irrelevant.

Commissioner Evans: Just a moment. Let us have the question then we will hear the objection.

Mr. Sweeney: I am just seeking to qualify this witness.

Mr. Shields: I admit his qualifications.

Mr. Sweeney: You admit his qualifications? That is sufficient.

Commissioner Evans: Very well, proceed.

half of the defendant, having been first duly sworn by said Commissioner, was examined, and in answer to interrogatories testified as follows:

Direct Examination on CLAIM No. 14

## By Mr. Sweeney:

- Q. 1. State your full name for the record, please.
  A. Milton E. Trenam.
- Q. 2. And your address, please? A. 1219 Locust, Denver.
- Q. 3. And you are employed by the Department and perform your duties in the office of the Bureau of Reclamation, Denver? A. Yes, sir.
- Q. 4. With respect to the contract in suit, tell his Honor, please, what your duties were at the job site? A. I was office engineer.

1510 Mr. Sweeney: Your Honor please, referring to Claim No. 17, as indicated just before we recessed, I am going to ask Mr. Bahmeier concerning certain of these claims.

Herman F. Bahmeier, returned to the witness stand, having been previously sworn, and testified as follows:

Direct Examination on CLAIM No. 17

#### By Mr. Sweeney:

Q. 96. First, with respect to Claim 17, I am referring to a conference on March 29, 1948, with the contractor's superintendent, Mr. Stewart.

Tell his Honor, please, did you discuss with Mr. Stewart the plan for operation of borrow pit No. 2 for the 1940 season? A. I did.

Q. 97. Tell his Honor the facts regarding that. A. Prior to the initiation of operations in the 1940 season, I made a field inspection trip with Mr. Jean Walton, field engineer, and Mr. Stewart, the contractor's superintendent.

I will strike that out, please. I am confused on the next day. There are two days in there.

Mr. Shields: Just a little louder, Mr. Bahmeier, please.

The Witness: Yes, sorry.

1511 A. (Continuing) On the dates referred to, March 29, Mr. Walton, field engineer, and I had a discussion with Mr. Stewart, superintendent for the contractor, at which we reviewed in considerable detail the contractor's plan of operation of this borrow pit No. 2 for the 1940 season.

Mr. Stewart advised us at that time where he planned to place the screening plant, locating it at the downstream end of the pit.

I recall quite distinctly we advised Mr. Stewart that it was the contracor's responsibility where the screening plant was located, and, therefore, we were, of course, not raising any objection to where he was placing it. We did call his attention, how ever, to the requirements of the specifications that it was the contractor's responsibility to remove all rock having dimensions greater than five inches,

which, of course, is well known as a specification requirement.

I think I already referred to that, however.

At that same conference, or discussion we will call it, we advised Mr. Stewart the approximate quantities that would be required to complete the various zones of the embankment and the estimated yardage of the various types of materials that were available in this borrow pit No. 2, which had been determined by extensive explorations.

And I won't touch on that any further, because that will be covered very extensively by 1512 other witnesses later on.

# By Mr. Sweeney:

Q. 98. Now, tell his Honor, please, to your personal knowledge, did the defendant submit to the plaintiff logs of all test pits excavated by it in borrow pit No. 2 with a map showing the location of each area and zone of the embankment for which each of the materials were suitable? A. Yes, we did furnish the contractor. I think it was early in April or a few days later from this discussion with Mr. Stewart. We furnished a drawing showing the logs of the pits in the various areas outlined in the drawing where different types of material were located. We also made an inspection of the borrow pit No. 2. This was early in April. Mr. Burns, Mr. Walton, and myself accompanied Mr. Wunderlich . and Mr. Stewart over the entire area of borrow pit No. 2. We examined the open test pits and further

discussed the proposed plan of the operation of the pit for the 1940 construction season.

The contractor was again advised, Mr. Wunder-lieh in this instance, of the various types of material in the pit; and, at that conference, if I recall correctly, there was no discussion as to how the contractor—what method the contracor would use in removing the oversized rock. We had previously discussed it with Mr. Stewart, and it was not mentioned to Mr. Wunderlich at that time.

1513 Q. 99. Now, please, referring to a conference in Denver on June 6, 1940, between the Bureau's representatives and the contractor, tell his Honor, please, just what took place at that conference to your personal knowledge regarding this claim. A. This will have to be entirely from memory, because I don't have before me a copy of the report of this conference.

I did attend the conference in the Denver office, as I recall, June 6, 1940.

Q. 100. You did make a written report later of the results, didn't you? A. No, I didn't write the report. I did attend the conference. I didn't write a report. I attended the conference June 6, 7, and 8.

Q. 101. And this conference was called particularly to discuss the operations in borrow pit No. 2? A. There may have been other claims touched upon, but my memory doesn't serve me correctly in that.

I do recall, however, that it was at that time that the contractor was—there was two—there was two proposals, as I recall it, made to the contractor at that time, two alternates, I will put it that way. One was that an area, as I recall, area No. 1, in the lower end of the pit would be set up as a cobble pit to the extent of some 250,000 yards; and the reason this

area was picked was because it had a high-1514 er percentage of cobbles than the other areas in the pit.

The price to be—I neglected to say, I don't know whether I did or not, but I will put it in now. Mr. Wunderlich was at this conference. I can't recall who else was there. The contractor was offered, as I say, to set up area No. 1 in borrow pit No. 2 as cobble pit to the extent of 250,000 yards, the contractor to be paid the cobble borrow pit price, as I recall, of 35 cents. I believe that is correct, 35 cents per cubic yard. That is item No. 9?

Mr. Shields: That is right.

A. (Continuing) Correct? Thank you.

Also, at this conference another proposal was made to Mr. Wunderlich. We called it an alternate which would include additional payment of four cents per cubic yard for an estimated quantity of about 9000— 900,000 yards, which is as near as we could estimate at that time, was the amount would be required to complete the embankment.

The next day after further consideration of the second proposal, we raised that to five cents a yard which would amount to an additional compensation of \$45,000.

Neither one of these proposals, as I recall, was satisfactory to the contractor, and he made a state-

ment, if my memory serves me correctly, that they were not satisfied, because he figured the cost of excavation from that pit, which I imagine includ-

ed the separation item of some manner, were nearer 42 cents than the 29 that we were finally offering him.

It was soon after this conference that the order for changes, I believe No. 2, were prepared, and submitted, and possibly No.—I don't know whether that number is correct—it was order for changes two or three—was prepared and submitted to the contractor but was never agreed to by Mr. Wunderlich to the best of my knowledge.

Mr. Sweeney: That is all on No. 17, your Honor.

Cross Examination on CLAIM No. 17

#### By Mr. Shields:

XQ. 102. This conference on March 29, 1940, had to do with the plan of operation for the 1940 season in pit No. 2? A. Yes, sir.

XQ. 103. Some work had been done in pit 2 in 1939, had it? A. Yes, there had been some excavation.

XQ. 104. 1938, I mean. A. 1938. Thank you. Yes, there had been some excavation made in borrow pit, the lower end, the downstream end of borrow pit No. 2 to the extent of approximately 79,000 cubic yards.

XQ. 105. And it had been found that the materials in this pit or this part of the pit that had been

worked in, at least, consisted of a large part of cobbles suitable for the embankment as cobbles? A. That is correct.

XQ. 106. At that time the contractor knew that he was going to insist on cobble price, at least, for doing cobble work, didn't he? A. Yes, that was very evident for that particular area, because it had been opened up, and he could see that that was the work in the part of the pit that I previously testified about a few moments ago. That portion of the pit contained the largest percentage of cobbles. The offer was made to the contractor.

XQ. 107. Just this, Mr. Bahmeier: Was the contractor ever paid for any yardage out of pit No. 2 as cobble on the estimates? A. No, not to the best of my recollection.

XQ. 108. Paid for as earth excavation? A. Paid for as earth excavation.

Redirect Examination on CLAIM No. 17 O

By Mr. Sweeney:

RDQ. 109. Mr. Bahmeier, do you know the percentage of cobbles taken from area borrow pit No. 2? Or, I should say, the percentage of material that constituted cobbles from pit No. 2? A. I have.

RDQ. 110. With pit No. 2? A. Yes, I am
1517 familiar with that. I have examined the
material very carefully with respect to the
quantities of cobble—the quantities of cobbles—I
will get it after a while—quantities of cobbles that

3. .

came from borrow pit No. 2 during the 1940 season as well as the cobbles, what we term as five-inch material from the same borrow pit.

The record indicates that the average percentage of cobbles based on actual quantities is 8 per cent, was 8 per cent, is better to say it that way.

This was arrived at by taking the total quantity of rock or cobbles over five inches in size and comparing that figure with the total quantity of excavation, from the pit. It was a matter of mathematical computation.

# By Commissioner Evans:

RDQ. 111. What was the total quantity of excavation from the pit? A. About 800,000 cubic yards.

RDQ. 112. That was used in this average? A. Approximately 850,000 cubic yards. 846, was the exact figure, close to 850,000 cubic yards.

Mr. Sweeney: That is all of the redirect, your Honor.

1518 Recross Examination on CLAIM No. 17

### By Mr. Shields:

RXQ. 113. Mr. Bahmeier, if the contractor had been required to get cobbles from the designated cobble pit instead of from a pit No. 2 designated as earth pit there would even in that case have been a large percentage of earth procured from the pit, wouldn't there? A. Yes, bound to have been, because you would have had the two gradations, plus five inch and minus five inch. Just what those

proportions would be, I can't say, because I have never seen an analysis or test of the cobble borrow material?

RXQ. 114. In other words, any cobble pit would have a various percentage of earth as well as this instance? A. I would answer it this way, Mr. Shields: If it was designated as cobble pit, probably the percentage of cobbles would be 20 per cent, maybe more, maybe 30 or 40 per cent of the total volume. A pit that only has an average of 8 per cent cannot very well be classified as a cobble pit.

And, I will offer this testimony from my own actual experience from similar material on other projects that the Bureau has constructed dams with material that ran as high as 20 per cent cobbles and was still classified and paid for at the earth borrow price. That is not excessive, at all.

RXQ. 115. In this instance, however, the government, and not the contractor, selected pit 1519 No. 2 for use? A. That is correct. It wouldn't be up to the contractor to select the borrow area. That is the government's job.

Mr. Shields: That is all.

Mr. Sweeney: That is all, your Honor, on No. 17. Commissioner Evans: All right.

1521 In other words, there will be days when, either due to weather conditions or breakdowns of equipment or short days that occur, it naturally cuts down on his production. So, in fig-

uring a profitable operation, the contractor cannot—should not be guided by his peak production, but he should be guided as to whether or not it is a profitable operation from the average production of the piece of equipment.

In this particular claim the average hourly production in excavating all types of material from borrow pit No. 1 was as follows:

The Lima dragline, which is rated as a No. 901, o'I believe is rated as a two and one-half cubic yard machine, but it had a three and one-half cubic yard bucket on it, actually produced 347 cubic yards per hour. That is the average production.

The Lima shovel, of two and one-half cubic yards capacity, actually produced 324 cubic yards per hour.

The Lorain shovel, the smaller shovel on the job, during the period it worked in this particular pit involved in this claim, produced 219 cubic yards per hour, which I would say would be an average production of that kind of material.

It would be a certainly profitable operation, I would think, from my experience.

I might add this comment: That this was an excellent borrow pit. Conditions were, you 1522 might say, ideal for working. Haul roads were— The elevation— Strike out that "haul roads," please. The elevation of the larger percentage of the material coming from this pit was at last 50 feet of the crest of the dam. The contractor had a downhill haul, which is what they all

\*like to have to keep their hauling costs down. All those factors enter into the operations, of course, of the borrow pit.

Commissioner Evans: Anything else?

#### By Mr. Sweeney:

Q. 119. Tell his Honor, please, the period that you referred to. Was that from June 30, 1939 to October 30, 1939? A. That is correct.

Q. 120. And will you tell his Honor, please, the capacity of the Lorain shovel you referred to? A. Lorain shovel, yard and a half.

1541 Mr. Sweeney: If your Honor please, Mr. Bahmeier having concluded his testimony, we are now taking up the facts regarding item No.

17 and then following on in order from there.

Sean R. Walton, returned to the witness stand, having been previously sworn, and testified further as follows:

## TESTIMONY ON CLAIM No. 17

Direct Examination on CLAIM No. 17

Mr. Sweeney: The next item of claim, your Honor, is No. 17, a claim for material removed from the borrow pit No. 2. For the record, defendant's proofs touching this item will be divided into two parts: (1) The facts regarding the general conditions on the job; and (2) The facts regarding or

touching the equitable adjustment made by the contracting officer regarding this claim.

Your Honor will note that he made an allowance of \$44,208.85 under this item. May we at this point invite the Court's attention to the fact that this claim is covered by paragraph 52, record 77; 55, record 82; 56, record 87; 57, record 87.

By Mr. Sweeney:

Q. 992 Mr. Walton, please refer to drawing number 191-D-45 attached to Defendant's Exhibit No. F, and point out to his Honor the location of borrow pits 1 and 2 thereon that were in-1542 volved in this dispute. A. I have indicated on Defendant's Exhibit F, on drawing 191-D-45, the approximate boundaries of where materials were taken out from earth borrow pit No. 2. I have indicated that with a dashed ink line and have an arrow pointing to the claim No. 17, initialled.

Q. 993. Will you note the cobble borrow pit as shown on the same drawing and mark it "Claim 17". A. I have also indicated on this same drawing by a solid ink line roughly the boundaries of the area set up in the specifications as "Cobble borrow pit area."

I have also indicated this as "Claim 17," and initialled it.

Q. 994. Now, will you also make the same notations on Defendant's Exhibit C, please? A. Thave also outlined on Defendant's Exhibit C, drawing

191-D-45, revised 12-5-41, a heavy inked line around the approximate area from which excavation was made in earth borrow pit No. 2 which is involved in Claim No. 17 and initialled it.

I have an arrow pointing to this marked "Claim No. 17." I have also outlined in ink an area downstream from the dam on the left side of the giver roughly outlining the area that was set up in the specifications as "Cobble borrow pit." I have an

arrow going to it marked "Claim No. 17," 1543 and it is initialled.

(Papers were marked for identification Defendant's Exhibits as follows: 17-A; 17-B, consisting of four pages; 17-C; 17-D, consisting of pages 1 through 28, inclusive.)

## By Mr. Sweeney:

Q. 995. We show you a document, please, marked Defendant's Exhibit 17-A, consisting of 19 pages. Tell his Honor what it reflects with respect to Claim item No. 17. Tell his Honor what it is, please. A. Defendant's Exhibit 17-A is a 10-day earth report for construction of Vallecito Dam covering the period November 1 to November 10, 1940.

This is the last report that was made for this year and the map attached to this report shows the area from which excavation has been taken from borrow pit No. 2. No further excavation was made after this time from borrow pit No. 2.

I should like further to refer to this map that is attached, which is Page 19. It will be noted on

this map on the upper portion there is an outline of borrow pit area No. 2. The entire outline in solid dashed lines indicates the area that was explored during the fall of 1938 and the fall of 1939 and the whole earth embankment borrow pit area No. 2 was broken down into sub-areas, areas (1) to area (8) inclusive. The reason for this was that each of these areas contained material of similar char-

acteristics and were treated as such in an 1544 earth report that was submitted to Denver.

In other words, the materials in area number (1) varied considerably from the materials in area number (4). Superimposed over these dotted lines are heavy inked lines that are colored yellow and red. The portion colored in yellow was excavation that had been made during 1940 previous to this 10-day period. The area that is colored in red indicates areas from which excavation was taken during this 10-day period. Also borrow pit area number one is shown on the map but is not involved in this claim under discussion.

It will also be noted that the earth embankment is nearing completion. The strip indicated in red on the earth embankment shows where material was placed during this 10-day period in the embankment.

## By Commissioner Evans:

Q. 996. What is the significance of this 10-day period to this claim, precisely? A. It was required at this time by our headquarters, the Denver office,

that an embankment placing operations report be submitted at 10-day periods. This is the last of those submitted in 1940.

Q. 997. Is the significance of this last 10 days merely the fact that it has the final report? A.

That is right.

1545 Q. 998. The operations in this report were not confined to 10 days? A. No, sir. The only thing is that this is a progressive report, that is the area outlined on the report is progressive and this does show the entire excavation made during the entire year.

Q. 999. Very well. A. It will also be noted on this map that there are indicated by dotted lines two areas in the downstream end of borrow pit No. 2 from which excavation was made in 1938 and 1939. That is indicated by a notation.

Also is shown the location of the screening plant.

Mr. Sweeney: The document is offered, if your Honor please, to illustrate the testimony to be given by the witness.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-A, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1000. We show you, please, a document marked Defendant's Exhibit 17-B, consisting of four pages. Tell his Honor what it is. A. Exhibit 17-B encompasses four reports made, by me to the

resident engineer, daily reports. These reports are signed by me. They are dated 7-9-40; 6-25-

1546 40; 5-14-40; and 4-25-40. Each of these has a reference in it which is indicated by a red mark that refers to this particular operation.

Mr. Sweeney: The document is offered, if your Honor please, to illustrate the testimony to be given by the witness.

Mr. Shields: This document which is offered is headed "Inspectors' daily report," and it appears that the reports attached are widely separated daily reports. Will all the reports on this subject be made available?

The Witness: They will not, because they are too bulky. These are some to illustrate particular points that are brought out. If you prefer that we wouldn't put these in and I will just refer to them in my testimony, we will do that.

Mr. Shields: I object to these as self-serving doc-\
uments put in by the witness and they are not complete.

Mr. Sweeney: These are obviously, as they show on their faces, daily reports, admissible as stated by the Court, I believe, in the Rosser case in 46 Court of Claims, citing the McCoy case.

## By Commissioner Evans:

Q. 1001. Are these the only four pertinent to this claim? A. Yes. They substantiate statements I will make in testifying.

Q. 1002. May plaintiff have an opportunity, if he wants, to check, to examine the others and 1547 see? A. There are some of the other reports that we propose to use as exhibits that pertain to some of the other claims.

Mr. Sweeney: May I suggest, it is my understanding, if your Honor please, that these records are down in Bayfield, Colorado, 450 miles from here through the snowdrifts.

Commissioner Evans: That is up to the contractor.

Will the government permit the plaintiff to examine them if he wants to?

Mr. Sweeney: I say yes for the United State of if your Honor please.

Mr. Shields: And I make the further objection that the witness says that these are merely to supplement what he could testify. It looks like he could testify to the facts.

Commissioner Evans: I think that goes without saying.

The exhibit is received for the purpose for which it was offered.

(The document referred to, marked defendant's Exhibit 17-B, consisting of four pages, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1003. We next show you a document marked defendant's Exhibit 17-C. Tell his Honor what it is.

A. Defendant's Exhibit 17-C is a drawing prepared in the project office at the close of the job showing the various portions of both borrow pit No. 1 and borrow pit No. 2 from which excavation was made in 1938, 1939 and 1940.

This has a legend on it which explains from which different area excavation was made in the different years and indicates the areas involved in this claim. This drawing is similar but to a larger scale and it is more complete than the one which is attached to this last earth report.

Mr. Sweeney: The document, if your Honor please, is offered to illustrate the testimony to be given by the witness.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-C, is filed in connection with this case.)

(Short recess.)

By Mr. Sweeney:

Q. 1004. We show you a document marked Defendant's Exhibit 17-D, Page 1. Tell his Honor, please, what it is. A. This photograph was taken on November 20, 1939 and shows excavation being made by both the Lima dragline and Lima shovel in the downstream end of earth borrow pit No. 2.

This is in what was later designated as area No. 1.

This is in the portion of the pit which the government concedes the cobble content was heav-1549 ier than the average of the earth embankment borrow pit and offered to set this up as a cobble borrow pit area.

## By the Commissioner:

Q. 1005. Will you indicate where, at the time this picture was taken, what element or strata was being excavated? Where did the dragline dip in? A. Right here at the bottom.

Q. 1006. This bucket from the dragline as shown in the photograph drops down to the bottom and picks a load up from the bottom and not from the side? A. That is correct. No, sir. He starts the cut at the bottom of where the bucket drops to and cuts all the way up the slope coming up. The dragline is setting at a higher elevation excavating below its track, while the shovel is sitting in the bottom of the pit excavating above the tracks.

Mr. Sweeney: The document is offered as Defendant's Exhibit 17-D, Page 1, to illustrate the testimony to be given by the witness.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 1, is filed in connection with this ease.)

# By Mr. Sweeney:

1550 Q. 1007. We show you a document marked Defendant's Exhibit 17-D, Page 2. Tell his Honor what it is. A. This photograph was taken on November 22, 1939 and it is a closeup view of the shovel excavating in area No. 1 of borrow pit No. 2. The material from this excavation was placed on the embankment in lifts that would compact to six inches and the plus-five-inch rock removed by means of a rakedozer supplemented my hand picking. This is also the area that was proposed to be set up as a cobble borrow pit area.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 2 for the same purpose.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 2, is filed in connection with this case.)

Mr. Sweeney: And that will apply to all other exhibits.

## By Mr. Sweeney:

Q. 1008. We show you a document marked Defendant's Exhibit 17-D, Page 3. Tell his Honor what it is. A. This is a photograph dated May 9, 1940, showing the Lima dragline excavating, also in area No. 1 of earth embankment borrow pit No.

2. The material was also placed in the embankment and the rocks removed by the rakedozer method.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 3.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 3, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1009. We show you a document marked Defendant's Exhibit 17-D, Page 4. Tell his Honor what it is. A. Photograph dated May 9, 1940 and is taken showing the Lima shovel excavating earth materials from area No. 1, borrow pit No. 2.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 4.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-C, Page 4, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1010. We show you a document marked Defendant's Exhibit 17-D, Page 5. Tell his Honor what it is. A. This is a photograph dated May 13,

1940, showing the Lima shovel excavating material from borrow pit No. 2. This exca-

vation is also in what is later designated as area No. 1.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 5. Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D Page 5, is filed in connection with this case,)

## · By Mr. Sweeney:

Q. 1011. We show you a document marked Defendant's Exhibit 17-D, Page 6. Tell his Honor what it is. A. This is a photograph taken on May 15, 1940, which shows the Lima shovel excavating materials from earth embankment borrow pit No. 2 also in what was later designated as area No. 1.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, page 6.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 6, is filed in connection with this case.)

# By Mr. Sweeney:

Q. 1012. We show you a document marked 1553 Defendant's Exhibit 17-D, Page 7. Tell his Honor what it is. A. This is a photograph showing a closeup view of some of the excavation that had been made in borrow pit No. 2.

It will be noted that there is no excessive amount of plus-five-inch stones.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 7.
Mr. Shields: I move to strike that last part of the

answer.

Commissioner Evans: It is allowed. Mr. Shields: Otherwise, no objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 7, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1013. We show you a document marked Defendant's Exhibit 17-D, Page 8. Tell his Honor what it is. A. This is a photograph of the Lima shovel excavating in area No. 2 borrow pit No. 2 on May 24, 1940.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, page 8.

Mr. Shields: No objection.

Commissioner Evans: So received.

1554 (The document referred to, marked Defendant's Exhibit 17-D, Page 8, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1014. We show you a document marked Defendant's Exhibit 17-D, Page 9. Tell his Honor what it is. A. This is a photograph, May 4, 1940, showing a Euclid truck load of material being dumped on the embankment.

The oversized stones were removed from this material by means of the rakedozer method.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 9.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 9, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1015. We show you a document marked Defendant's Exhibit 17-D, 1 age 10. Tell his Honor what it is. A. This is a photograph of excavation being made in borrow pit area No. 2 in the portion of the pit that was later designated as area No. 1, dated May 24, 1940.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 10.

· Mr. Shields: No objection.

. Commissioner Evans: So received.

1555 (The document referred to, marked Defendant's Exhibit 17-D, Page 10, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1016. We show you a document marked Defendant's Exhibit 17-D, Page 11. Tell his Honor what it is. A. This is a photograph taken on May 24, 1940 which shows the dozer with rake attach-

ment spreading material and a Euclid dump truck dumping material that has come from borrow pit No. 2. This is on the wing.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 11.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 11, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1017. We show you a document marked Defendant's Exhibit 17-D, Page 12. Tell his Honor what it is. A. This is a photograph showing the rakedozer spreading material coming from borrow pit No. 2 on May 30, 1940. The rock in the background of this picture is in the cobble fill portion of the embankment and is rock that has been removed from the earth materials. Part of this has come

from the screening plant during the previous season.

Mr. Sweeney: This document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 12.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 12, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1018. We show you a document marked Defendant's Exhibit 17-D, Page 13. Tell his Honor what it is. A. This is a picture of the Lima shovel excavating material from borrow pit No. 2 area No. 6. It was taken on May 30, 1940.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 13.

Mr. Shields: No objection.

Commissioner Evans: So received:

(The document referred to, marked Defendant's Exhibit 17-D, Page 13, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1019. We show you a document marked Defendant's Exhibit 17-D, Page 14. Tell his Honor what it is. A. This is a photograph taken on May 30, 1940 on the embankment looking toward the right abutment and shows the material that is being

placed in the upstream part of the No. 2 sec-1557 tion, the material having been excavated

from borrow pit No. 2. It will be noted that a windrow of stones is laying in the central portion of the picture. These have been removed from materials by raking with the dozer and will be placed in the cobble section of the embankment.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 14.

Mr. Shields: No objection,

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 14, is filed in connection with this case.)

#### By Mr. Sweeney:

Q. 1020. We show you a document marked Defendant's Exhibit 17-D, Page 15. Tell his Honor what it is A. This is a photograph taken on May 31, 1940, showing the Lima dragline excavating materials from area No. 2, earth embankment borrow pit No. 2.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 15.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 15, is filed in connection with this case.).

## 1558 By Mr. Sweeney:

Q. 1021. We show you a document marked Defendant's Exhibit 17-D, Page 16. Tell his Honor what it is. A. This is a photograph taken on June 20, 1940. It shows a haul road going into borrow pit No. 2. This is looking upstream. The truck approaching is coming towards the dam.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 16.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document refered to, marked Defendant's Exhibit 17-D, Page 16, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1022. We show you a document marked Defendant's Exhibit 17-D, Page 17. Tell his Honor what it is. A. This is a photograph taken on June 20, 1940, which shows the face of the cut in borrow pit No. 2.

Stadia rod shows about the bottom of the depth of glacial till and the material below the bottom of the stadia rod in the central portion of the picture consists mostly of gravel and sand.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 17.

Mr. Shields: No objection.

1559 Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 17, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1023. We show you a document marked Defendant's Exhibit 17-D, Page 18. Tell his Honor

what it is. A. This is a photograph taken on June 22, 1940, which shows the face of a cut in borrow pit No. 2. The upper half of the cut is in glacial till but the lower half is mostly sand and gravel. This excavation in this area was made in two cuts.

#### By The Commissioner:

Q. 1024. What is the pole in the middle? A. That is a stadia survey rod.

Q. 1025. Does the horizontal line close to the top of that indicate the first half of the excavation?

A. No, sir.

Q. 1026. What is the line that shows near the top of that pole? A. That is just a strata of the material, probably sandy lands that run through there.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 18.

Mr. Shields: No objection.

Commissioner Evans: So received.

1560 (The document referred to, marked Defendant's Exhibit 17-D, Page 18, is filed in connection with this case.)

#### By Mr. Sweeney:

Q. 1027. We show you a document marked Defendant's Exhibit 17-D, Page 19. Tell his Honor what it is. A. This is a photograph taken on July 6, 1940, which shows the shovel and the dragline making a simultaneous excavation in borrow pit No. 2, area No. 2. The shovel is excavating the cut above

the roadway that the trucks are running on while the dragline is excavating below this roadway.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 19.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 19, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1928. We show you a document marked Defendant's Exhibit 17-D, Page 20. Tell his Honor what it is. A. This is a photograph taken on July 9, 1940, showing the picture of a 18-yard Euclid bottom dump truck which had just recently been received on the job, hauling material from borrow pit No. 2. This is on the embankment.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, 1561 Page 20.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 20, is filed in connection with this case.)

#### By Mr. Sweeney:

Q. 1029. We show you a document marked Defendant's Exhibit 17-D, Page 21. Tell his Honor

what it is. A. This is a photograph taken July 15, 1940, which shows the face of a cut from which the shovel is exacavating in borrow pit No. 2, area No. 2.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 21.

Mr. Shields: No objection.

Commissioner Evans: So received. . .

(The document referred to, marked Defendant's Exhibit 17-D, Page 21, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1030. We show you a document marked Defendant's Exhibit 17-D, Page 22. Tell his Honor what it is. A. This is a photograph taken on July 30, 1940, which shows the Lima dragline excavating in borrow pit No. 2, area No. 7. The average depth of the cut is about 17 feet.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, 1562 Page 22.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 22, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1031. We show you a document marked Defendant's Exhibit 17-D, Page 23. Tell his Honor what it is. A. It is a photograph of the Lima shovel excavating in borrow pit No. 2, area No. 6. The average depth of the cut is 33 feet. This cut consists mostly of gravelly material but there is a lens of about six feet that is glacial till.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 23.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 23, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1032. We show you a document marked Defendant's Exhibit 17-D, Page 24. Tell his Honor what it is. A. This is a photograph taken August 7, 1940. This shows the Lima dragline excavating material for the embankment from area No. 8 of borrow pit No. 2. The cut is about 18 feet in depth,

the upper 10 feet of which is glacial till and 1563 the lower eight feet is gravel and sand.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 24.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 24, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1033. We show you a document marked Defendant's Exhibit 17-D, Page 25. Tell his Honor what it is. A. It is a photograph dated September 13, 1940, which shows the dragline making excavation in earth borrow pit No. 2, area No. 1. This area No. 1 is the portion of borrow pit No. 2 that was at one time proposed to be set up as a cobble borrow pit.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 25.

Mr. Shields: No objections.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 25, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1034. We show you a document marked Defendant's Exhibit 17-D, Page 26. Tell his Honor what it is. A. It is a photograph taken on October 28, 1940, showing the dragline taking the second cut through borrow pit No. 2.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 26.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 26, is filed in connection with this case.)

### By Mr. Sweeney:

Q. 1035. We show you a document marked Defendant's Exhibit 17-D, Page 27. Tell his Honor what it is. A. This is a photograph taken on October 31, 1940, showing the Lima shovel taking the second cut in borrow pit No. 2 at stage 65 plus 50 over 16 plus 50. The average depth of the cut is about 12 feet.

Mr. Sweeney: The document is offered, if your Honor please, as Defendant's Exhibit 17-D, Page 27.

Mr. Shields: No objection.

Commissioner Evans: So received.

(The document referred to, marked Defendant's Exhibit 17-D, Page 27 is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1036. We show you a document marked Defendant's Exhibit 17-D, Page 28. Tell his Honor what it is. A. This photograph was taken on July 15, 1941.

It shows the Lorain shovel making excavation in what was later designated as borrow pit No. 3. This is in the area that is shown on specification drawing as "Cobble borrow pit area." This excavation wasn't involved in the claim.

Mr. Sweeney: Defendant's Exhibit 17-D, Page 28 is now offered to illustrate the testimony to be given by the witness.

Mr. Shields: The last is objected to as irrelevant, "not being involved in any present claim."

Commissioner Evans: Why is it offered?

The Witness: It is offered for purposes of comparison.

(Conference off the record.)

Commissioner Evans; Objection overruled and the document is received as offered.

(The document referred to, marked Defendant's Exhibit 17-D, Page 28, is filed in connection with this case.)

Mr. Shields: Plaintiff hasn't objected to these pictures. They are correct and show what they show, but they are selected pictures and plaintiff wants access to the complete files showing photographs not represented by these pictures but shown

by other pictures taken in the regular course.

1566 They selected certain pictures showing the least possible amount of trouble. They haven't selected the representative pictures at all.

Mr. Sweeney: May the record show that the plaintiff has also selected certain pictures.

Mr. Shields: We got them from you. We did not take them.

Commissioner Evans: The witness desires to make a statement. I will hear him.

The Witness: I would like to say in this connection that the contractor was given a full opportunity to come up and examine our photograph file covering every picture that was made on the project and select what pictures he desired from these, which we ordered for him from Denver, which have been used in this suit to bring out the points that they desired to bring out in the various claims.

Commissioner Evans: To whom was that offer made?

The Witness: Mr. Ted Wunderlich came up and went through the entire album and selected whatpictures he desired.

Commissioner Evans: De you make your statement in the form of an objection, Mr. Shields?

Mr. Shields: Well, I don't desire to make an objection. I desire the record to show that plaintiff believes these are not representative pic-

tures

sary.

Commissioner Evans: No ruling is neces-

Mr, Shields: No.

Commissioner Evans: Very well.

(Conference off the record.)

Commissioner Evans: We will take an adjournment until 9:30 o'clock, Monday-morning.

(Thereupon, at 4 o'clock p.m., November 16, 1946, an adjournment was taken in these proceedings until 9:30 o'clock p.m., November 18, 1946.)

1568 (The parties met, pursuant to recess, at 9:30 o'clock a.m., on the 18th day of November, 1946, in the Court Room of the United States Court of Appeals, Post Office Building, Denver, Colorado, Appearances were as previously noted.

Mr. Harold E. Hastings, a certified shorthand reporter, was duly sworn by the Commissioner.)

And thereupon, the following proceedings were had:

## By Mr. Sweeney:

Q. 1037. Mr. Walton, I show you a document marked 17-E. Tell us what that is? A. Defendant's Exhibit 17-E is a memorandum report to the Construction Engineer on the operation—copy of a memorandum report to the Construction Engineer on the operation of the earth embankment, barrow pit number two at Vallecito, represented by me, dated December 20, 1940.

Q. 1038. Would you just describe in some detail what it is and in what way it relates to this item? A. This report was prepared to be transmitted by the Construction Engineer to the Contracting Officer in order to give the Contracting Officer the facts.

relative to barrow pit number two and some cost data that we had kept on the job in order for the Contracting Officer to arrive at an equitable adjustment and compensation under Change Order Number Three.

Q. 1039. Has this been taken from official files? A. From the project files.

Mr. Sweeney: It is now offered to illustrate the testimony to be given by the witness.

that connection that it will be noted that in that report there are a few photographs missing. The most of these have already been put in evidence in Defendant's Exhibit 17-D, and those that are not in evidence are in the photograph album which, I believe is in the court room, which the Defendant's attorney can examine if he so desires at this time. The reason that that is not in there is that we did not have enough of these copies in the project files.

Mr. Shields: These represent the condition of the project on or about December 20, 1940?

The Witness: That is correct. The four that are contained in this report were gathered during the operation. It was a matter of controversy and we have been unable to reach an agreement with the contractor and he had been given a Form B-3, Order for Change Number Three which directed him to proceed with the work and submit his statement of additional cost after the work was com-

pleted. This data was gathered and kept by Bureau of Reclamation engineers.

Mr. Shields: What would you say as to the source of the data from which this was collated? Would you enumerate something which you did resort to?

The Witness: Well, most of it was gathered by inspectors working under my direction during the progress of the work. Some of it I gathered myself.

Mr. Shields: Were these reports, made by 1570 the inspectors, received and incorporated in the data which you used; as coming from them?

The Witness: Some of it is in the project files at Vallecito Dam; some of the information I gathered myself and kept in notes and then incorporated into reports.

Mr. Shields: Are the notes and inspector's reports, from which you collected this data, available for inspection?.

The Witness: They are, I think, in the Vallecito Dam files; they are not here. They were in the Vallecito Dam files last, when I prepared this; I presume they still are.

Mr. Shields: I have no objection to the exhibit as such. We do object to this witness testifying on hearsay or any hearsay information incorporated in the document and moves that all such be disregarded.

Commissioner Evans: How do you think it can be determined?

Mr. Shields: That, I presume, will be developed as we go along; I don't know now.

Commissioner Evans: If will be received.

(The document above referred to, marked Defendant's Exhibit 17-E, is filed in connection with this case.)

The Witness: That report contains an index and then the narrative portion of the report including photographs consists of pages 1 to 72 inclusive and an attached drawing number 131.

By Mr. Sweeney:

Q. 1040. I show you a document marked 17-F, pages 1 to 7 inclusive. Tell his Honor what that is.

A. Exhibit 17-F-1 is a letter from the Con-1571 struction Engineer to the Chief Engineer

that was written by me and all the data attached thereto was prepared by me. This letter merely supplements that report and makes some changes in the total cost figures as shown in the report by reason of the project having received some rental rates from the Contracting Officer that were to be used that were slightly at variance with the ones that had been used in the report. In other words, the figures shown in this letter are the final figures as to costs. That supplements the figures shown in the previous exhibit.

Mr. Sweeney: It is now offered.

Mr. Shields: It is objected to because it was not brought to the attention of the Contracting Officer.

Mr. Sweeney: May the Court please, that is one of the reports or communications from the Defendant's engineers on the job.

Mr. Shields: It was not brought to the attention of the Contracting Officer.

Mr. Sweeney: To help understand the evidence; it is a part of the transaction and relates to the transaction. It is explanatory of the fact itself and an essential part of it. Without the whole transaction it can not be fully understood. I submit, if your Honor please, that was written at the time of the transaction and it is essential to explain it.

Commissioner Evans: The objection is overruled. You may proceed.

### 1572 By Mr. Sweeney:

Q. 1041. I show you a document marked Defendant's Exhibit 17-G. Will you tell His Honor what that is? A. Defendant's Exhibit 17-G is a tabulation of areas in barrow pit number two from which it was proposed to get the material needed from this barrow pit during 1940, showing the percentage of cobble contained in each one of these areas as reflected by the data from logs of test pits. This was prepared prior to the time any excavation in 1940 was accomplished. The map attached thereto is dated January 22, 1940.

That tabulated data gives, under where it says "Cobble Percentages" under "A", is the percent of cobbles in the excavation that is in solid volume.

Under "B" it gives the percent of cobbles taken

on the basis of embankment yardage. In other words, this includes void space that is in cobble fill which, of course, makes the cobble amount higher.

This shows the three inch to five inch rock and the plus-five inch rock in a percentage basis.

The column headed "A" and headed "Plus-five Inch" is the column that shows the percentage compared with the total solid excavation. This is explained in an explanatory statement at the bottom of that.

The map attached thereto has areas 1 through 8, barrow pit number two, outlined by heavy lines and it also indicates a proposed branch operation of the barrow pit to secure the material that was

needed to complete the embankment and also to complete the cobble section of the embankment. This was merely done for formulating a plan of operation previous to the commencement of the placing operation for the 1940

season.

Also indicated on this map is a green dashed line which shows the indeterminate line or approximate location. The indeterminate line, as shown on the specification drawing 181-D-45, earth embankment, barrow pit area on the left side of the river.

Q. 1042. Tell us, please, did you prepare the tabulated data? A. I prepared the tabulated data but: the penciled figures that are on here are not mine; these were put on, I think Mr. Bahmeier put those in in the Denver office when we were up there in conference.

Mr. Sweeney: No reference will be made to the penciled notes, Your Honor. It is now offered.

Mr. Shields: Was this data obtained from test pits?

The Witness: That data that is on there is from these test pits which were excavated which I will explain shortly. The entire quantity of the material coming from test pits was screened by government forces over three-inch screens and over a five-inch screen and this is a sumation of the data of a test pit in each of these respective areas.

Mr. Shields: The excavation in 1940 was actually carried on in the neighborhoods in areas indicated by this drawing and by this tabulation?

1574 The Witness: By referring to Defendant's Exhibit 17-C, you can see what portion of each of these areas that excavation was actually taken from.

Mr. Shields: I object to data based on test pit examination or information obtained as stated; it was not made available.

Mr. Sweeney: It is to illustrate testimony which will be given by the witness.

Commissioner Evans: The objection is overruled.

Mr. Shields: Exception.

Commissioner Evans: It is so received.

(The document above referred to, marked Defendant's Exhibit 17-G, is filed in connection with this case.)

Q. 1043. I hand you a document marked Defendant's Exhibit 17-H, pages 1 to 4 inclusive. Tell us what it is. A. That is a letter from Martin Wunderlich Company to the Construction Engineer, dated December 23, 1939; a letter from the Construction Engineer to the Martin Wunderlich Company, dated December 15, 1939; a letter to Martin Wunderlich Company from the Construction Engineer dated June 29, 1938; and a telegram to the Martin Wunderlich Company, signed "Burns", dated De-

(The document above referred to, marked December 21, 1939.)

Q. 1044. Will you explain to His Honor what was the purpose of the offer? A. These letters are introduced to illustrate the difficulty that 1575 the Construction Engineer was having in getting the contractor to designate a superintendent with full authority to act for him.

Commissioner Evans: Do they pertain to Claim
17?

The Witness: Yes, sir.

Mr. Shields: I object on the ground that they are already in evidence.

Mr. Sweeney: I checked carefully last night and they are not in evidence.

Commissioner Evans: So received.

(The document above referred to, marked Defendant's Exhibit 17-H, pages one to four inclusive, is filed in connection with this case.)

Q. 1045. I show you a document which has been marked Defendant's Exhibit 17-I, pages one to two inclusive. Tell His Honor what it is? A. This exhibit is a letter from the Chief Engineer, Mr. Harper, to the Martin Wunderlich Company. It is dated August 29, 1940, which encloses a photograph or draft of the form that is used on a Form "B" order which I think was requested by Mr. Wunderlich.

Mr. Sweeney: It is now offered.

Mr. Shields: No objection.

Commissioner Evans: It will be received.

(The document above referred to, marked Defendant's Exhibit 17-I, two pages, is filed in connection with this case.)

1576 Mr. Sweeney: We next offer a certified copy of a letter dated September 9, 1940, from the Commissioner to the Secretary of the Interior and the Secretary's approval thereof is noted on the order. This is approval for proposed order for change number three. It is now offered.

Commissioner Evans: Is there any objection?

Mr. Shields: No objection.

Commissioner Evans: It will be received.

The document above referred to, marked Defendant's Exhibit No. 17-J, three pages, is filed in connection with this case.)

Q. 1046. I show you a document marked Defendant's Exhibit No. 17-K. Tell His Honor what that is. A. This is a copy of a letter from the project files to the Martin Wunderlich Company dated October 7, 1940, from the Construction Engineer. It transmits a copy of Order for Change Number Three.

Mr. Sweeney: It is now offered.

Mr. Shields: No objection.

Commissioner Evans: It will be received.

(The document above referred to, marked Defendant's Exhibit No. 17-K is filed in connection with this case.)

## By Mr. Sweeney:

Q. 1047. I show you a document which has been marked Defendant's Exhibit No. 17-L. Tell His Honor what that is. A. This is a letter from the

Construction Engineer to the Chief En-1577 gineer, dated October 17, 1940; which states that the local office of the Martin Wunderlich Company advises that they have been informed about the Jefferson City office that the order—

Q. 1048. Never mind reading it—A. Has it been received?

Mr. Sweeney: It is offered, Your Honor.

Mr. Shields: It is objected to as irrelevant and of no value in this case and, in any event, it is interdepartmental.

Commissioner Evans: May I look at it?

Mr. Sweeney: It is offered, Your Honor, to show that the Construction Engineer is advising the Chief Engineer in Denver that the Martin Wunderlich Company has acknowledged receipt of the order as stated therein. It was written at the time, if Your Honor please, which relates to this transaction.

Mr. Shields: Acknowledgment was given and that letter was not necessary to establish the fact.

Commissioner Evans: Is the letter of acknowledgment in the record?

Mr. Shields: Yes, sir.

Mr. Sweeney: I can't say that it isn't; I haven't any record of it; it may be. There are some documents that I just can't keep.

Commissioner Evans: I will overrule the objection; it appears to be harmless. It is received.

(The document above referred to, marked Defendant's Exhibit No. 17-L, is filed in connection with this case.)

document which has been marked Defendant's Exhibit No. 17-M, pages one to seven; please tell His Henor what it is. A. That is a letter dated April 30, 1941, from the Construction Engineer to the Chief Engineer. This letter deals with the Contractor's detailed Submission of Claim and discusses it fully—discusses the hours of labor and the hours of operation of equipment and are in substantial agreement with the records that have been kept

by the government. It is a letter consisting of three pages and there are four pages of tabulated data attached thereto that were prepared by me.

Mr. Sweeney: It is now offered.

Mr. Shields: It is interdepartmental, self-serving and was not brought to the attention of the Plaintiff. It is objected to for that reason.

Commissioner Evans: The objection is sustained.

Mr. Sweeney: May we please point out, if Your Honor please, this is a communication from the Construction Engineer to the Chief Engineer in Denver explaining the facts regarding the claims presented by the Plaintiff.

. Mr. Shields: Give us a copy of it and it will be all right.

Mr. Sweeney: It relates to the transaction and is explanatory as part of the information that the Chief Engineer had to have before he could make any determination and we submit, if your Honor

please, very respectfully, under the rules 1579 stated in the McCoy case 193 U. S. 593, and

Rosser, Case 46, Court of Claims, 192, 196 that this is one of the communications from a subordinate officer to a superior officer on the basis of which the superior officer is enabled to make his determination, required under the contract, without which he couldn't do it.

Commissioner Evans: The record contains your statement and the document will be up with the record. See R1580.

Q. 1050. We show you document marked Defendant's Exhibit 17-N, one page. Tell His Honor what that is? A. This is a letter dated April 4, 1940, from the Construction Engineer to the Martin. Wunderlich Company, taken from the Denver files, I guess. This letter—

Commissioner Evans: It pertains to this claim? The Witness: Yes, sir.

Commissioner Evans: Any objection?

Mr. Shields: No objection,

Mr. Sweeney: It is now offered.

Commissioner Evans: It will be received.

(The document above referred to, marked Defendant's Exhibit No. 17-N, is filed in connection with this case.)

#### By Mr. Sweeney:

Q. 1051. I show you a document marked Defendant's Exhibit No. 17-O. Tell his Honor what it is, please. A. That is a telegram from the Chief Engineer to the—

Commissioner Evans: What is the Ex-

The Witness: 17-O. A. (Continuing) to the Construction Engineer, Vallecito Dam.

Q. 1052. What does it relate to? A. It relates to the location of barrow pits for the 1946 operation; dated April 15, 1940.

Mr. Sweeney: It is now offered, Your Honor.

Mr. Shields: It is objected to as being interdepartmental and was not brought to the attention of the Contractor.

Mr. Sweeney: Off the record a moment, if your Honor please.

Commissioner Evans: Off the record.

(Whereupon, there was unrecorded discussion.)

Commissioner Evans: On the record.

Let the record show that the objection is overruled and the document is received, and at the same time the ruling pertaining to Defendant's Exhibit 17-M is reversed; the objection is overruled and the document is admitted.

Does the Plaintiff wish to enter an exception? Mr. Shields: We note an exception.

(The document above referred to, marked Defendant's Exhibit No. 17-0, is filed in connection with this case.)

(The document above referred to marked Defendant's Exhibit No. 17-M, is filed in connection with this case.)

By Mr. Sweeney:

Q. 1053. I show you a document which has been marked Defendant's Exhibit 17-P, 1 to 13 1581 inclusive. Will you please tell His Honor what it is? A. This exhibit is a copy of a letter from the Construction Engineer to the Chief Engineer, dated April 27, 1940, transmitting copies of two letters—one dated April 24, 1940, and one

April 27, 1940—that were sent to the Martin Wunderlich Company by the Construction Engineer.

Attached to the letter of April 27, 1940, is a record of the logs of all the test pits excavated in the earth embankment or borrow pit number two along with map number 60 which outlines the area that it was proposed to take the various types of material from during 1940. Indicated on here are the zones of embankments for which the material in each of the areas are suitable and a note that states that the boundaries indicated are approximately correct only.

Mr. Sweeney: It is now offered.

Mr. Shields: We make the same objections as advanced on the others which Your Honor just overruled.

Commissioner Evans: Objection overruled; the documents are admitted.

(The document above referred to, marked Defendant's Exhibit No. 17-P, three pages, is filed in connection with this case.)

By Mr. Sweeney;

Q. 1054, I show you a document marked Defendant's Exhi<sup>1</sup> it No. 17-Q, pages one to seven. What is it, please? A. This is a letter from the Construc-

tion Engineer to the Martin Wunderlich 1582 Company which transmitted Order for

Change Number Two; also attached to this is a letter from the Chief Engineer to the Construction Engineer which contains copies for Order for Change Number Two and directing him as to the transmittal of these.

Q. 1055. Are these necessary to illustrate the testimony which you are to give? A. I don't think that Order for Change Number Two is in evidence.

Q. 1056. Tell us. A. That's right, it is necessary.

Mr. Sweeney: It is offered in evidence.

Mr. Shields: No objection other than that the Plaintiff never accepted Change Order Number Two.

Commissioner Evans: It is accepted in evidence.

(The document above referred to, marked Defendant's Exhibit No. 17-Q, seven pages, is filed in connection with this case.)

#### By Mr. Sweeney:

Q. 1056. Tell His Honor what are the facts regarding this item with respect to the conditions on the job.

Commissioner Evans: The items being Claim Number 17.

Q. 1057. Claim 17 wherein the Plaintiff is asking for \$181,000.00—

Commissioner Evans: I am familiar with it.

A. The claim number 17 involves excavation from earth borrow pit number two on the left side of the Pine River, upstream from Vallecito

1583 Dam.

The specifications include drawing number 191-D-45 on which are shown two earth barrow pits or proposed areas from which mate-

rial would be secured for the construction of the dam; also shown down stream from the dam, on the left hand side of the river, is indicated an area from which it is proposed to secure cobbles to make up any deficiency that is lacking from other excavations.

Mr. Shields: I object to that last. It doesn't say that on the drawing; it is the witness' own interpretation and I move it be stricken.

Commissioner Evans: The motion is allowed.

Mr. Sweeney: Let me talk off the record, if Your Honor please.

(Whereupon, there was unrecorded discussion.)

The Witness: The contract set up in schedule item 14 was the excavation from earth barrow pits under schedule item number 16, the excavation for cobble barrow pit.

Commissioner Evans: May I interrupt a moment, I have a question for Mr. Sweeney. There is a difference in phraseology between item and claim. We understand of course what the claims are. What are contract items?

Mr. Sweeney: Well, I would say schedule items that are in the specifications.

Commissioner Evans: Very well.

Mr. Sweeney: Page 45, Judge.

The Withess: That refers to the schedule items in the specifications.

1584 Commissioner Evans: Contract item 14 is the one that carries into that claim 17, is that right?

The Witness: Item 14, that is correct, sir.

Commissioner Evans: All right, and item 16 is a point of controversy. Go ahead.

A. I might say here that the contract bid price under schedule item 14 was 23c per cubic yard; under schedule item 16 it was 35c per cubic yard.

Late in the fall of 1939, as has previously been explained in claim item number one, the materials suitable for number one and three zones of embankment was practically exhausted in borrow pit number one.

Previous to this time material for all three zones of the embankment had been secured from barrow, area number one.

As I explained in that claim, item number one, the contractor was taking all the material available for these number one and number three zones from the barrow area number one and for a while it looked as though the work for that year would be completed without making excavations from barrow area number two. Late in November, however, to secure materials to complete the number one and three zones of the embankment up to the elevation at which the number two zone was then completed it became necessary for the contractor to excavate some material from barrow area num-

ber two. This was done during the month of November.

During the 1938 construction season, a small area on the right side of barrow area number two had been used to secure impervious material consisting of silt and clay for the construc-

tion of a portion of the coffer dam and for filling the cut-off trench across the river channel. This involved the excavation of approximately 94,000 to 95,000 cubic yards. The excavation was made with Laterno Carry-all Scrapers and made in that location at the contractor's request—in this area, and for the convenience of himself because of the ease of operation and short haul involved. All of the impervious material consisted of silt and clay and was removed in this operation and course-graded, gravelly material was encountered.

This excavation that was made in 1938, of course, being made with scrapers, was taken off in six inch to eight or ten inch lifts, the operating characteristics of a scraper being entirely different from a shovel or drag line.

When the contractor decided during the month of November, 1939, that it was going to be necessary to go to this pit to secure a small quantity of material to finish up the embankment before we were shut down, due to freezing weather conditions, as I remember it, the first of November, the Lima shovel was moved into this pit and when the freezing weather conditions became such that impervious material could no longer be placed—the drag line was also moved over to this pit until such time that a total of approximately 79,000 yards was

excavated during 1939 from barrow pit num-1586 ber two.

I might explain here that one reason that two machines were moved over to this pit was that we had allowed the contractor to proceed as far as we could with the construction of the impervious zone because we were getting freezing weather practically every night and we knew that it was only a short while until the construction of the number two zone would need to be suspended because of the frost in the ground and the requirements of the specifications that no material could be placed when the embankment was frozen.

It was possible to continue placing material in the number one and number three zones for a considerably later period than it was in the number two zone because that could be thawed out each morning if the frost had not penetrated too deep, by sprinkling the fill. In other words the water would thaw out the fill and we could go ahead placing the material until late in the evening and therefore it was possible to continue a little later after operations had been suspended in the impervious zone.

This completed all operations that were done in barrow pit number two during 1939. When the payment voucher was submitted to the contractor for signing, covering the monthly estimate for November and the first few days in December, it was the final voucher for the season's operation, the chief clerk for the contractor objected, or I might say, to the payment because he stated that they had made a considerable quantity of cobble barrow excavation and had not been paid for any cobble barrow pit excavation; the payment had been paid un-

der schedule item 14, from earth embank-1587 ment barrow pits.

It was apparent during the later part of the 1939 construction season that practically all of the remaining coarse graded materials for the number one and number three zones of the embankment and possibly a small quantity for the number two zone of the embankment would have to, of necessity, come from barrow area number two. In order to properly zone the barrow pit for distribution of the materials from barrow pit to the embankment, the government forces carried on extensive exploration activities during the fall of 1939 and this extended on into the winter and the early part of the winter of 1940.

Test pits were excavated on approximately 200foot centers over the entire area that is outlined by the dashed lines on Defendant's Exhibit 17-C in earth embankment barrow pit number two. Samples were taken from each of these test pits and complete analysis run in our field laboratory for gradation, perculation and compaction.

In excavating these test pits with government forces, we screened all of the material that was taken from each test pit over a screen having three-inch square openings and over another screen having five-inch openings, thus to determine the percentage by volume of rock from three to five inches in size and over five inches in size contained in the volume of each of these test pits. This data was used in formulating a plan of operation for 1940

such that the embankment could be completed and also to see if the embankment could be completed or, that is, the cobble portion of the embankment could be completed with the cobbles secured from

the required structure excavation and the barrow pits without making excavations from the cobble barrow area.

The date that has been tabulated on Defendant's Exhibit 17-G shows this information. Now it will be noted on this exhibit that in one column is shown plus-five inch rock which is in solid volume and is the percentage of solid volume that was excavated from each test pit. In another column is shown the percentage on the basis of the cobble recovery in embankment measured-I would like to explain here the cobbles as they are placed in the fill leave a large amount of air void space because they are large size pieces and do not fit closely together while in the barrow pit all the excavation all the void space is filled with fine graded material and it is compacted solidly in there such that, we'll say, the material contains ten percent of cobbles in embankment measure would produce more than ten percent of cobbles or, I mean, in barrow pit measure, would produce more than tempercent of cobbles in embankment measure. This is shown and explained on this exhibit, 17-G.

Very shortly after the embankment operations were closed down for the 1939 season, the contractor asked the construction engineer that he wanted to know the designated areas from which barrow pit excavations would be made for the 1940 construction season. In the letter dated January 5th, 1949, the contractor made such a request and the construction engineer's letter of January

1589 22nd, 1940, replied that it was the intention to secure the material for the cobble fill from all cobble larger than five inches obtained from earth barrow pit materials and that if there was a deficiency of cobbles after this that the excavation, to supply this deficiency, would be secured

from the cobble barrow pit.

Mr. Shields: I am going to object to his recounting the contentions of these letters; the letters themselves are the best evidence of what is in them.

Commissioner Evans: Objection overruled; it is merely a foundation. Go ahead.

The Witness: (Continuing) The investigations and the proposed plan of operation from barrow pit number two—embankment barrow pit number two—and as a result of these tests I have previously described, it was decided that to properly construct the embankment during 1940 and secure the type of materials that were needed for the various zones of the embankment, most of the excavations would be made from areas one, two, seven and eight. Exhibit No. 17-C shows that excavation was actually made in these areas; most of the excavations coming from area number two, area num-

ber one, and area number six, with only a small quantity from area number eight and area number seven.

The results of these tests, as I have explained, showed by taking the average of all pits ex1590 cavated in each one of these areas, that area number one contained a larger percentage of cobbles than any of the other areas, amounting to 13.6% by volume. Area number two, which was to be taken in two cuts—the first cut, which consisted mostly of glacial till, contained 6% by volume of rocks larger than five inches in diameter; the second cut, as determined by test pit data, contained only 2.8% by volume; area number seven 6% and area number eight 13%.

It was shown very conclusively by these test pits that the material in area number one contained a larger percentage of plus-five inch cobbles than the other areas in the pit.

The specifications, under paragraph 55, provide that all stones larger than five inches in diameter shall be removed.

Mr. Shields: I object to his telling what the specifications are.

Mr. Sweeney: He is not; he is only indicating to the Court and to Your Honor, please, where these five-inch stones are coming from.

Commissioner Evans: A certain amount of this may be necessary. He may proceed.

Mr. Shields: I say that we are not bound by his statement as to what it provides.

Commissioner Evans: Definitely you are not bound by this testimony. It does not alter or effect the contract.

The Witness: (Continuing) The specifications, number 55, require that no stones having 1591 maximum dimensions in excess of five inches be placed in the earth fill portion of the embankment and such stones that are removed from the embankment will be placed in the cobble fill portion of the embankment.

There were a number of letters exchanged between the Construction Engineer and the Contractor over the controversial point during the winter of 1939 and '40. I think most of these are in eyidence.

The sum and substance of it was that the Contractor wanted payment as cobble barrow pit for all excavation that was to be made from earth embankment, barrow pit number two, while the government could only make payment under schedule item number 14 at 23c per yard for earth embankment barrow pit excavation.

On March 29, 1940, after all of the exploratory work had been completed and assembled and copies of the logs of the test pits—I don't remember the exact date, I think it was little later than this—were supplied to the Contractor.

Q. 1058. April 26, 1940. A. This data was being assembled at the time we had completed the exploratory work. In March, 1940, Mr. Bahmeier and

I had a conference with Mr. Stewart relative to his operations of barrow pit number two for the 1940 construction season. Mr. Stewart asked where he should locate his screening plant. He was advised by Mr. Bahmeier in my presence that it was not the concern of the government where he moved his screening plant to or whether he used his screening plant or not; that all we were concerned

about was that the materials coming from 1592 barrow pit number two be placed in accord-

ance with the provisions of the specifications and all stones larger than five inches must be removed. In other words, if he chose to do this by a screening plant method that was satisfactory or if he chose by some other method that was satisfactory as long as the embankment was placed in accordance with the provisions of the specifications.

These logs were, as previously explained, (copies of these logs) submitted to the Contractor with the letter of April 27, 1940, from the Construction Engineer to the Contractor—dated April 26, 1940—also again told the Contractor that it was his responsibility as to how he removed the rock which was oversized from the materials excavated from the earth embankment barrow pit and the government had no intention of making payment for the materials other than under schedule item number 14 and for placing these materials in the embankment in accordance with the applicable provisions of the specifications.

During the arly part of April, 1940, Mr. Burns, Mr. Bahmeier and myself, representing the government, went over the entire area of barrow pit number two with Mr. Wunderlich and Mr. Stewart and discussed the types of material that would be encountered in each of the various parts of this pit. We talked it over, walked over the entire barrow area, looked at the test pits, looked at the rocks that had been removed in the screening performed by government forces, and discussed the operation

of the pits. The Contractor was advised of 1593 the different types that would be encountered and the zones in the embankment for which these materials were suitable. To the best of my recollection, there was no discussion, during this conference, as to how the Contractor proposed to remove the oversize stones.

The Contractor's letter of April 29, 1940, to the Construction Engineer protested the decision of the Construction Engineer's letter of April 26th—and said that this protest was filed in accordance with paragraph 14.

Embankment placing operations for the 1940 season were started on March 28, 1940, and on this same day the Contractor started dismanteling the screening plant from its previous location. (I might explain here that during the 1937, 1938 and 1939 seasons, the plant was located downstream of the embankment and to the immediate left of the spillway and outlet channels. It was used in this loca-

tion for the screening of all required excavations that required screening, from the spillway excavation, from the outlet works excavation, the cut-off trench excavation and the diversion channel excavation. These excavations, at the beginning of the 1940 season, had all been completed.) Therefore the Contractor started dismanteling its plant on this same day, March 28th, apparently in preparation for moving it to another location as he apparently intended to set it up to screen the materials or some of the materials coming from barrow pit number two. During the period of April 5th to May 11th, 1940, the Contractor used a small crew of men

and a small amount of equipment excavating 1594 for and erecting the screening plant and con-

structing a ramp up to the screening plant. The plant was left somewhat similar to what it had been for operations in previous seasons except the conveyor belt was eliminated; the plan of operation was for trucks to haul up a ramp to above the screening plant, dump the materials in a chute and this chute would feed the materials into a scalper which would scalp the materials, scalp over-large stones, plus 13 inch stones; would remain in the material, the material would come down to a vibrating grizzly which had wide bars just the same as they had been spaced the year before and two and a half inches in the clear and there it would be separated, that is, separated into material that would pass the screen and material that was retained on the screen.

This set-up of the screening plant was completed far enough that, on May 12th there was a short. test run made and it was supervised by Mr. Wunderlich personally. If I remember correctly, Mr. Stewart was not there when this test run was made. I ran into him up at the rock barrow pit seven miles up-stream and asked him how the plant was working and he told me, as I remember it, he didn't know exactly. Shortly thereafter, after this test run was made which consisted, as I found out later, of putting five loads of material in the plant, I visited the plant and looked it over and it was easy to see that the reason the plant wouldn't work was. as it was then constructed, the material that came down the chute had large boulders in it which wedged and blocked the passage of the material and the material would not feed through. It wasn't going to operate satisfactorily as it was then constructed.

derlich came up to the office and conferred with the Construction Engineer and stated that the screening plant as it was then constructed was not capable of handling this material and he was leaving immediately for Denver to discuss the screening operation with the Denver office. Mr. Wunderlich did come into the Denver office and discussed with the engineers in Denver—a conference was held in the Denver office on June 6th, 1940, between Bureau of Reclamation engineers and rep-

resentatives of the Contractor. I was not in attendance in this conference but Mr. Bahmeier was and testified to this conference yesterday. Through reports and correspondence I know what took place in the conference and I am going to refer to it here so as to develope—

Mr. Shields: I am going to object to that as hotes taken from other sources.

Commissioner Evans: You will have to leave out any reference to hearsay.

The Witness: (Continuing) With the Construction Engineer's letter of June 10th, 1940, to the Contractor was submitted order for Changes Number Two. This order for Change Number Two was submitted as a result of this conference held in Denver on June 6th, 1940, to which Mr. Bahmeier testified in his testimony previously.

The order for Change Number Two proposed to set up the area designated as area number one as a cobble barrow pit in lieu of the cobble barrow pit shown on the specification drawing.

1596 Commissioner Evans: You are referring to area number one of barrow pit number two?

The Witness: Two; correct.

Mr. Shields: That area is shown on what paper? The Witness: That area is shown on Defendant's Exhibit No. 17-C.

Mr. Shields: Okay.

The Witness: (Continuing) The reason that it was proposed to set this up as a cobble barrow area

was that in our studies it had been determined that it was believed that most of the cobbles needed could be secured from this excavation and that it would not be necessary to go to the cobble borrow pit that was so designated in the specification drawing to secure any deficiency of cobbles that remained after all other excavation operations were complete.

It was proposed to set this up as a cobble borrow pit, pay the contractor under schedule item 16 at 35c per yard for the material that was taken from this pit and pay overhaul in accordance with that set up for cobble borrow pit. It was also stated that it was anticipated to take approximately 250,000 yards out of this area that would be paid for under item number 16; the specifications had set up only 50,000 cubic yards to be taken from the cobble borrow pit as designated in the specifications. This would amount to an increase in additional compensation to the Contractor of approximately \$40,000.

The Contractor rejected this proposal and made a proposal of his own which is covered, I think, in some of the correspondence that is in evi1597 dence. That was not acceptable to the government and would not be accepted by the government.

Following these conferences in Denver, no agreement could be reached with the Contractor and it seemed that the Contractor would not accept.

Change Order Number Two; the government would not accept the proposal made by the Contractor and it was therefore concluded that the only basis for proceeding with the work was to issue the Contractor a Form "B" Order which directed him to proceed with the work and to present any claim for additional compensation that he had within ninety days of the date of order.

Commissioner Evans: Let us note a recess.

(Recess)

Commissioner Evans: The hearing will be in order.

The Witness: (Continuing) The Contractor, at a later date, asked for an extension of time and this was granted which gave him a total of 120 days:

Commissioner Evans: After the Form "B" was issued?

The Witness: The Form "B" was extended to the Contractor — sent our letter, I think the date of the Construction Engineer's letter was October 7th, 1940, sent to the Contractor with the Form "B" order. I would like to make a correction in a statement that I made in the early part of my testimony.

I think I stated that the excavation in barrow pit number two that was excavated in 1938 as coming from—as being on the right side of the river and it should be on the left side of the river.

The Contractor, in this first initial set up that they had made in the screening plant, had it in a new location exactly as it had been in separating the required structure excavation. The provisions of the specifications on that provided that the bars should be spaced at two and one/half inches in the clear. The Contractor had been advised that we only required the material coming from barrow pit number two to have the rocks larger than five inches removed. He had left the grizzly as it had formerly been which would have separated on a two and a half inch basis.

Following these conferences in Denver, the Contractor then proceeded to remodel the screening plant. This took place during the period June 13, 1940 to June 21, 1940. The design of the plant, as it was then installed, was changed considerably; the Contractor installed a short section of conveyor belt, put in the feeding hoppers that had been used in the initial set up of the screening plant in 1939, and made a number of changes in it such that it looked like the operation would be satisfactory.

The remodeled screening plant was placed in operation on June 21, 1940, and was used thereafter for the remainder of the 1940 season for screening practically all material that was excavated from barrow pit number two. There were a few times when the plant would be shut down for some repairs or for some reason or other it wasn't in operation and some materials were hauled directly to the embankment and the rock removed as had been

done during the 1939 season; however, after this date of June 21, 1940, substantially most of 1599 the material from the barrow pit excavation

was put thru the separating plant. The separating plant, as it was set up at this time, was designed with the idea that it would handle excavations from both the Lima shovel and the Lima dragline excavating simultaneously in the barrow pit. As the operation proceeded, there was only about half of the time that both machines were actually excavating from barrow pit number two; thus during the time that only one machine was operating, the plant was running at about fifty percent of its maximum capacity. Although, during fifty percent of the time that the plant was running, it was handling material coming from one machine, the cost of operating the plant remained practically constant such that the cost of separating was considerably higher when only one machine was in the pit than it was when two machines were in the pit.

The excavation from barrow pit number two was started in April 1940, about the 22nd. I might say here that, although embankment placing operations had been in progress some little time previous to this, they consisted mostly of placing material in the temporary diversion channel.

The Contractor effected the second diversion of the river along about the first part of April and all placing operations were thereafter concentrated in filling the diversion channel and making this safe so that the increased lake level would not have any possibility of seeping through this area. Thus it was not necessary to go back to barrow pit number two until April 22.

1600 During the period April 22nd to June 21st, 1940, during the period that the Contractor was setting up the screening plant and also remodeling the screening plant, the removal of the plusfive-inch stones on the embankment, as required by the specifications, was done by the same procedure it was done in the fall of 1939; that is, using this rake dozer raking the rock material out of the material over into the cobble filled portion of the embankment. This method had been used during November 1939 and it was used until June 21, 1940. The removal of the plus-five-inch stones by this method was not very satisfactory. There was a large quantity of oversize stones that was left in the embankment materials, covered up. This resulted in extreme difficulty in securing maximum compaction with the sheep's-foot rollers and also this method of removal was responsible for a lot of the fine material being shoved over into the cobble filled section of the embankment.

After the screening plant was placed in operation—that was in June 21st—the plant operated very satisfactorily; there were many times that both machines were excavating and materials were being screened at a rapid rate. They continued the operation on a two-shift operation basis the rest of the season up until November 7th, 1940.

At this date, the Contractor had placed the embankment to an elevation to where it brought the greater portion of the length of the dam—the earth filled portion of the embankment—as required by the specifications; it had been completed to the re-

quired elevation?

1601 The Contractor had also stock piled in a road ramp at the left abutment of the dam immediately upstream from the dam a sufficient quantity of screened materials that they estimated would be sufficient to complete the remaining portion of the earth embankment. That was needed; that is, it would be done in 1941.

Following this, during the next two or three weeks, the contractor dismantled the plant from its location in the barrow pit and moved it out of the area. This was done because, as the lake level came up the following spring, this entire area would be flooded and he desired to dress up the bottom of the pit, to take cross-sections and get everything in it cleaned up before the lake level came up the following spring.

There was a total of 846,891 cubic yards of material excavated from the earth embankment barrow pit two during 1940 and payment was made at 23c per cubic yard under item 14 of the schedule.

Of this quantity, approximately 266,000 cubic yards of material was excavated and placed in the embankment previous to the time the screening plant was placed in operation and rocks removed

by this hand picking and rock-rake method on the embankment. The remaining quantity of approximately 581,000 cubic yards, for the most part, was put through the sceening plant. Payment was made to the Contractor for placing of these materials in the embankment at the bid price of 50c per cubic yard in the earth filled portion of the embankment and 15c a yard in the cobble filled

portion of the embankment.

During the 1940 construction season, a total of 109,927 cubic yards of cobble fill was emplaced in the embankment and was paid for under the applicable item of the schedule. Most of these cobbles came from barroy area number two; there was a small quantity that came from barrow. pit number one and was removed on the fill by hand picking but most of the cobble that was placed in. 1940 came from barrow area number two.

During the investigation work that was in process in the fall of 1939, the government conducted some tests to determine the void factor in cobbles in embankment. Very careful tests were run and it was determined that 38% of the area in the cobble filled section was voids. By applying this void factor to the yardage that was placed in the embankment during 1940 in the cobble filled section and comparing this with the total excavation that was made in barrow area number two during 1940, it gives us a figure of 8% of cobbles that was remeved from all materials excavated from barrow

pit number two during 1940. Test pit data had previously indicated that the area number one in this barrow pit contained a higher proportion of cobbles than any of the other areas and this is the area that was proposed to the Contractor to set up as a cobble barrow area; by eliminating a portion of the material excavated from area number one we arrive at a figure of 6.3% cobbles for the remainder of all excavations made excluding areas number one of barrow pit number two.

There was the second cut that was taken through area number two of this barrow pit which consisted of appreciable amounts of material excavated from the whole pit that contained less than three percent cobbles. The materials in this second cut consisted of sand and gravel and in every respect was similar to the material that was excavated from the scattered barrow subpits in barrow area number one that are involved in claim number one. These materials could have been placed very successfully in number one and number three zones of the embankment with only a very nominal amount of rock removal on the fill and could have been done more economically than by screening the material; however, the Contractor elected to put this material through the screening plant and this operation was satisfactory as far as the construction of the embankment is concerned and he was permitted to do it. In other words, the method of removing the plus-five-inch stones from

the embankment materials from earth barrow pit was strictly the Contractor's responsibility and the government did not care how he did it as long as it was done in accordance with the provision of the specifications. If the Contractor elected to put the material through the screening plant that could have been placed without putting it through the plant, that was his choice.

Mr. Shields: I think the witness is wandering from a statement of facts and getting in conclusions.

Commissioner Evans: Please stick to the facts.

The Witness: (Continuing) During the period of

October and November, 1940, government engineers made some studies; this was done 1604 by me and under my direction-of the cost to the Contractor of screening materials at the screening plant and the studies were made to determine the amount of increased hauling time required by reason of putting material through the. screening plant instead of hauling directly to the embankment; also some studies were made of the cost during the period May 29th to June 21st inclusive as to the cost to the Contractor of removing the plus-five inch rock on the embankment as was done during this period previous to the time the screening plant was placed in operation. These studies are covered completely in this report which is Defendant's Exhibit 17-E, and are supplementary to letter dated May 5, 1951, which is Defendant's Exhibit 17-F-1.

It was determined, as a result of these studies, that the actual cost to the Contractor of removing plus-five inch rock on the fill amounted to approximately three cents per cubic yard. It was also determined that the average cost of removing plus-five inch stones, based on these studies, for all material removed from barrow pit number two during 1939 and 1940 amounted to approximately six and a half cents per cubic yard.

The detailed portion of these costs are contained in this exhibit.

The Contractor was paid at five cents per cubic yard for placing of embankment in the earth filled portion of the embankment. Included in this five cents, or included in the work that was to be done under this provision in the schedule item is the

spreading of the material on the embank-05 ment, removing five-inch stones that come in

from the embankment, securing optimum moisture content in the materials—that is, sprinkling if it is necessary—and doing whatever processing is necessary for the materials and rolling them with the sheep's-foot roller twelve times to secure maximum compaction.

It will be noted that a portion of this cost includes the removal of a nominal amount of five-inch or plus-five inch stones from the materials. Therefore it is felt that some portion of the cost of removing all five-inch stones, as is reflected by these figures, should be credited—

Mr. Shields: I object to that as a conclusion. He is not stating facts.

Commissioner Evans: The witness is about to give you credit for something. Are you explaining how you arrive at the cost?

The Witness: How we arrive at these and what was figured

Commissioner Evans: Go ahead.

The Witness: (Continuing) In other words, after arriving at this six and a half cents a cubic yard, there should be a small portion of this five cents per yard credited to that which would probably bring it down to five or five and a half cents per cubic yard added to his haul cost of performing this additional work by the Contractor.

The initial statement of claim of the Conractor was received in the project office on December 28,

1940. This was the statement of claim for

changes number three; this totaled \$334,994.42. This statement did not have detailed matter
showing the hours of operation of equipment and
hours of labor and it was returned to the Contractor by the Construction Engineer with a request
that it be restated in sufficient detail that it would
permit checking by the government engineers.

The Contractor resubmitted in detail the statement of claim under date of April 8, 1941. The total amount claimed had been increased to approximately \$30,000 to \$366,924.39.

The Contractor also submitted, with his letter to the Chief Engineer of June 23, 1942, a revised statement of claim which was in the amount of \$389, 923.78. However, the amounts in the release on contract was as the second statement; that is, \$366, 924.39.

A proposed adjustment for compensation was submitted to the Contractor by the Contracting Officer on June 16—dated June 16, 1941, and proposed a lump sum payment to the Contractor of \$44,208.85 for additional work that was performed in the barrow pit.

Mr. Shields: You were getting the cobble from a so-called pit and additional work for only—

The Witness: \$244,208.85 as the amount of additional compensation that the Contracting Officer had found as equitable and proposed to the Contractor for performance of the work required under order for Changes Number Three.

It had been found in making the study of the Contractor's claim dated April 8, 1941, that the amount of labor shown, the cost of materials 1607 and the hours of operation of equipment

were substantially in agreement with the government records.

A few items of equipment had been included in this statement of claim which was found could not be allowed; that was a sheep's foot roller and the tractor—the number of tractor hours required to pull this roller. This was not allowed because the

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rolling in the embankment was done irrespective of cobble content in the barrow pit and was found not to be an item that should have been in this statement.

The allowances for use of equipment were found to be greatly in excess of what was considered a reasonable rental allowance by the Contracting Officer.

The order for Change Number Three had set out that the Contractor would submit its statement for claim for doing additional work; it was not anticipated that the contractor would make claim for the entire operation for excavating the material from the earth embankment barrow area number two and then deduct the amount that had been paid and consequently all cost studies that are included in this report—Exhibit No. 17-E—were made on the basis of only the additional work that was done by reason of separating the plus-five-inch rock from the materials excavated, part of which is a contract obligation in the placing of the embankment.

However the Contractor made his statement of claim and covering all operation in the barrow pit and the Contracting Officer found that it could, by

applying the rental allowances that the Con-1608 tractor considered to be fair and equitable,

arrive at an equitable adjustment and therefore computed the adjustment for compensation for order for changes Number Three on this basis.

I would like to refer to a couple of pages in this report, Exhibit—Defendant's Exhibit 17-E. It will

be noted on page 51 of this report that it is given that the cobble recovery from all materials excavated from barrow pit number two during 1940 is 12.36% in embankment measure of cobbles; this includes the 36% voids that are in the cobble fill. This figure tallies exactly with the approximate percentages that I have used, when allowances are made for the voids.

The same is true for the computation in arriving at a figure of 10% if area number one is excluded. That is, if this is correct, to allow for the voids in the cobbles, it comes down to approximately 6.2% as measured in solid excavation, as the material is in the barrow pit. In other words these figures shown in here in paragraph 42 of page 51, are in embankment measure.

The photographs included in this report show average conditions and in considerable details—the pictures of the screening plant.

It will be noted in the paragraph on page—photograph on page number 12 that there is a large pile of cobbles, that is, large cobbles, on excess of 13 inches in diameter lying in front of the screening

plant. These rock were separated from the 1609 material by a scalping grizzly and allowed to

fall in a pile and the Contractor moved a shovel into this area once a week and loaded out these larger rock and hauled them to the cobble section of the embankment. Those were allowed to accumulate over a considerable period before being removed. The photograph on page 30 of this exhibit shows the results of screening the material excavated from a test pit approximately four feet by four feet by ten feet deep in the number one zone of the embankment from which the plus-five-inch stones had been removed on the embankment by means of a rake dozer.

Commissioner Evans: You madé a test pit in the embankment?

The Witness: In the embankment; yes, sir. The purpose was to determine what percentage of plus-five-inch stones were still remaining in the embankment after the contractor had presumably removed them all previous to rolling.

Mr. Shields. You mean from an area not in the cobble part of the embankment, in the earth part of the embankment?

The Witness: Number one zone which is the earth part of the embankment, upstream zone.

The pile of rock at the extreme right hand corner of this picture are all stones larger than five inches in diameter which, under the provisions of the specifications, should have been removed before the rolling was accomplished.

This pit is ten feet deep in the completed portion of the earth embankment. In other words, this picture shows that the work was not being performed satisfactorily and was the reason for many

1610 of the re-rolls that were necessary to secure maximum density.

Mr. Shields: I object to that as a conclusion of the witness.

Mr. Sweeney: Those are not conclusions, they are facts.

Commissioner Evans: They pertain, whatever they are—they pertain, do they not, to some claim other than seventeen?

Mr. Shields: Yes, sir.

Commissioner Evans: Objection overruled.

Mr. Shields: Exception.

The Witness: (Continuing) The rock, in other words, are shown, pertaining to claim 17, that they were performed—in the removal of the stones on the embankment by this method was not satisfactory and later resulted in some of the other claims—

Mr. Shields: Same objection.

Commissioner Evans: Overruled.

Mr. Sweeney: Many of these claims, if Your Honor please, are overlapping. Sometimes 2, 3, or 4 of them overlap.

Mr. Shields: Exception.

The Witness: (Continuing) The photograph shown on page 34 is a panorama view of barrow pit number two looking from the opposite side of the lake. The embankment is shown at the extreme right hand side of the picture; the screening plant in the left hand side of the right photograph of this panorama view and the barrow pit, number two, extending down through the central portion of the foreground.

Mr. Sweeney: Mark that, please, for His Honor.

(The witness complied.)

on photograph on page 34 of Exhibit 17-E a pen line indicating location of barrow pit number two and also the location of the screening plant and the dam.

Photograph shown on page 36 of Exhibit 17-E shows the face of a cut in the upstream end of barrow pit number two from which excavation was taken; it shows the face of a cut which extends approximately fifty feet high.

This excavation was made in two cuts. This is representative of the materials excavated in this area.

The other photographs are representative of excavation operations in barrow pit number two and placing of the materials from barrow pit number two in the embankment and of the operation of the screening plant.

Q. 1059 At this time, please refer to Defendant's Exhibit 17-D, pages one to twenty-seven. What do the photographs show so far as it might be necessary to reflect in regard to claim 17?

Commissioner Evans: Weren't those photographs shown on Saturday?

Mr. Sweeney: They were covered but I am asking now as some of them will illustrate matters.

A. All of the photographs that were included, that is, from Exhibit 17-D, pages one to twenty-

seven, are photographs covering representative operations in this barrow pit and emplacing embankment materials that were excavated from barrow pit number two. These show—there are a consider-

able number of photographs, the earlier ones in here that were taken in area number one,

which is the portion of this pit that contained the most cobbles; some of them extend on down through later operations into area number two—the second cut of area number two which contained the least percentage of cobbles. I think these cover most of the photographs that were taken for progress in this barrow pit during this period.

I think, although there are a number that are not in here, those pertained to other things other than this barrow pit.

Photograph 450 yas taken in 1941.

Commissioner Evans: Which page is that?

The Witness: Page 28 of Exhibit 17-D. This is not in barrow pit number two but was later designated barrow pit number three and is the area shown on specification drawing 191-D-45 as a cobble barrow pit area.

Mr. Shields: Mr. Witness, you wouldn't be understood to say that représented any excavation in the area you are talking about?

The Witness: Represented excavation? Mr. Shields: Yes.

The Witness: The excavation was made here right back through to where the shovel is.

Mr. Shields: That photograph doesn't represent the excavation made in that area though, does it? The Witness: The shovel made the excavation at the time—

Mr. Shields: The rocks there are the rocks that were left there after you took the rocks out of the excavation—

1613 The Witness: I think I know what the Plaintiff's Attorney is driving at. As the excavation was made in this area, the larger of the stones that could be kicked aside were left in the pit because they were not needed on the embankment and were not desired.

Mr. Shields: That's right; it is not a picture of the excavation but waste cobbles after getting the excavation.

The Witness: It is a picture of the excavation as the last part of the excavation was being made.

Q. 1060. (By Mr. Sweeney) I show you, please, Plaintiff's Exhibit D, an appeal from the Contracting Officer's decision. Refer to the photographs contained in it relating to Claim 17 and tell His Honor if those photographs are representative of the typical conditions.

Commissioner Evans: Which Exhibit is this?

Mr. Sweeney: Plaintiff's Exhibit, his appeal—Plaintiff's Exhibit D.

Commissioner Evans: All right.

A. These photographs have no dates or no titles. on them and therefore it is possible—it is not possi-

ble exactly to identify them; but they do represent apparently—they have been taken in barrow pit number two but they do not represent average operating conditions there. They are picked out to show some specific picture.

Q. 1061. Can you identify the photographs to which you refer by page or number?

1614 The Witness: Plaintiff's Exhibit D. The photographs—may we go off the record?

Commissioner Evans: Off the record a moment.

(Whereupon there was unrecorded discussion.)

Commissioner Evans: On the recold.

The Witness: They are under Exhibit Y of the Plaintiff's appeal.

I won't go into each one of these photographs because I think I can make some general statements.

Most of these have been taken where it was a common practice that where a large boulder was encountered to set that aside with the shovel and leave it lay in the pit unless it was obstructing other operations and in some cases the contractor, in order to get some of the larger boulders out the way, picked those up and hauled them and placed them in the cobble filled portion of the embankment, which was quite a ways from the borrow pit, and they were not paid for that only as earth embankment borrow pit prices.

There are a number of photographs here that show one extremely large boulder in the picture. This was encountered but it was not an average. condition. I think this was the only boulder encountered in the whole borrow pit that was anywhere near this size. The same is true of photographs showing placement operations of the embankment.

Most of these photographs are taken so as to show the large cobbles that were removed 1615 from the material in placing and raking them out ofter they had been windrowed up. In other words, after they had been windrowed up the picture was taken of the windrow.

Mr. Shields: They were government pictures, weren't they?

The Witness: Those are not.

Mr. Shields: Are you sure of that?

The Witness: I don't think these are. I have no way of knowing whether they are government pictures. The Contractor took some pictures on the job.

Mr. Shields: You got them from us?

The Witness: You might pick out a lot of government pictures. This picture I testified to previously which shows the screening plant, shows a large pile of boulders in front of the screening plant that are the boulders that were scalped over by the scalping grizzly. This pile of boulders possiby represents a week's operation, may be less than that,

The photographs taken of the test pits are pictures of test pits in area number two that were excavated by government forces and all of the material coming from the pit was screened. In one pile was put all material that passed the three-inch screen; the rocks retained on the three inch screen but passing a five-inch screen in another pile; the rocks retained on the five-inch in another. It

will be noted that practically all of these 1616 photographs have the plus-five-inch rocks in the foreground such that it looks like the cobble — average cobble content is considerably higher than it actually was.

I don't know that these test pits that are shown here are test pits from which the excavations were actually made of it. There was a large area that was explored here that was not used; excavation was not actually made in it.

Q. 1062. Mr. Walton, please, with respect to the original cobble area pit that was shown on drawing 45 of Defendant's Exhibit F, have you explained to the Court whether or not the Plaintiff removed any material from that cobble barrow pit and the reasons why, if he did? A. The Contractor removed approximately five thousand yards of material from what we designated borrow pit number three which is shown on drawing "Cobble Borrow Pit Area." This material was removed to secure earth materials to complete the embankment during 1941 after the Contractor had allowed a portion of the materials that were stock piled for this purpose to become flooded. This excavation was made, not to secure cobbles, but to secure earth materials.

Commissioner Evans: Was that the only excavation made from the cobble pit area?

The Witness: All that was made from this cobble pit area as shown on drawing 191-45-D.

Q. 1063, (By Mr. Sweeney) Just a few more questions touching Mr. Wunderlich's Claim 1617 17. Tell His Honor please, with respect to area number two—in area number one in pit two if it was designated as a source of cobble material in this order for Changes Number Three? A. Two.

Q. 1064. Number two, but with respect to the hauling distance; the free haul distance 2400 feet. Tell His Honor whether it was longer or shorter than the haul from this pit to or as compared with the haul from the embankment to the original cobble area that you have noted as number three. A. In the proposal that was made to the Contractor in order for Change Number Two of setting up area number one of the earth embankment barrow pit area number two as a cobble borrow pit in lieu of the cobble barrow pit shown in specification drawing, the Contractor proposed to pay the-the Contracting Officer proposed to pay the Contractor under schedule item 16 for the excavation of approximately 250,000 yards of material. The overhaul provision, as set out to cover excavation from cobble barrow pit, was to also be applicable to this portion of the pit. The cobble borrow pit was set up for a free haul limit of 2500 feet. Earth embankment borrow pit was set up for a free haul of 5,000 feet. The free haul from area number one to the embankment is comparable, possibly just a little longer than it would have been from the cobble barrow pit area.

Q. 1065. Area number one of barrow pit number two? A. Area number one of barrow pit number two, Exhibit 17-C.

did the Plaintiff ever make any claim with regard to the over-haul of this cobble? A. The initial claim that the Contractor submitted for the excavation that was made in 1939 claimed payment for cobble borrow pit and also over-haul. The submission of claim covered 1940 and was made on a labor-equipment-operation basis. I don't know whether it included over-haul or not.

Q. 1067. Sometime about the latter part of July or the first of August and with respect to the negotiations that were being carried on between the parties regarding this matter, to your own knowledge did Mr. Wunderlich ever threaten to stop all the work in there unless an agreement was consumated touching this? Did you ever hear of Mr. Wunderlich stopping work or threatening to stop work? A. You mean the entire work?

Q. 1068. Just with respect to this operation regarding this order for Change Number three? A. No, sir; I never; not to my knowledge.

Q. 1069. What did the Plaintiff have to do, if anything, with regard to excavation of materials

in pit one? A. Pit one was used as a source of practically all materials in 1938 and 1939. Pit one consisted mostly of silt and clay extending to bed rock or underlain with strata of sand and gravel. The lower portion of barrow pit number one consisted mostly of sand and gravel. This sand and gravel contained only a small amount of oversize rock and what oversize rock was encountered was removed by hand picking methods just with hand 1619 labor.

Q. 1070. With regard, please, to the estimate, what quantity of cobbles in this new cobble area, which was area number one of pit two, tell his Honor, please, if the government engineers refused to—first, tell His Honor, did Mr. Wunderlich request such information, to your knowledge? A. I don't quite get that question.

Q. 1071. Did he ask you to give him information with regard to percentage of combles in this new cobble area? A. I don't know exactly. I think possibly he might have asked Mr. Burns.

Mr. Shields: I object to what he thinks.

# By Mr. Sweeney:

Q. 1072. Tell His Honor what you know first, and fell His Honor if, in the letter of April 27, 1939, submitting the logs based upon the exploratory, would that give information as to percentages of cobbles? A. It stated the type of material that was encountered, the complete logs of the pits; it did not

give results of screening carried on by government forces.

Off the record, please?

Commissioner Evans: Off the record.

(Wherenpon there was off-the-record discussion.)

By Mr. Sweeney:

Q. 1073. Plaintiff has testified that the hauling distance from area number one, pit two, as compared with the hauling distance from the hauling dis

pared with the hauling distance from the original cobble pit to the embankment was

three or four times as long. Tell His Honor what the facts are, touching that, if you haven't already covered that.

Mr. Shields: May it please the Court, Plaintiff never testified about area one at the beginning or at the end or at any other time about the distance from area one. We knew nothing about area one.

Mr. Sweeney: We submit that possibly Mr. Shields didn't know what it was.

Commissioner Evans: Off the record.

(Whereupon an unrecorded discussion was had.)

Commissioner Evans: Let the record show that the correction desired by Counsel for the Plaintiff pertains to the designation of area one; that the testimony did not refer to area number one but pertained to hauling distance from barrow pit number two. Do you understand the question?

The Witness: I understand this; I believe. I want to know if I am answering about the total of bar-

row pit number two or only area one in barrow pit two?

Q. 1074. (By Mr. Sweeney) In testimony for the plaintiff Transcript, page 274, Cross Question 1320—"Whereas you excavated a very large quantity of material from borrow pit number two, didn't you?" Answer, "Yes, but borrow pit number two was much more expensive than the cobble borrow for us to move."

Question, "Why was it more expensive? You were already in it." Answer, "It was a much longer haul?"

Question, "Just for the longer haul?" Answer, "Yes, but it had to be processed just the same as cobble borrow, You had to put the material through a separating plant the same as you did cobble, and this number two pit was three or four times as long a haul and therefore it was a lot more expensive," now we only want you to tell His Honor, what are the facts touching that? A. The haul distance from center of borrow pit number two as compared with the haul distance fromthe center of cobble borrow area, as set out in specifications, is longer. The haul distance from center of gravity of area one of barrow pit two as compared with haul distance from center of gravity' from cobble barrow area as set out in specifications are approximately the same.

Mr. Sweeney: That is all.

## **Cross Examination**

### By Mr. Shields:

XQ. 1075. But the government measures distances in an airline and not by the route actually traveled? A. The government measures distances provided in the specifications by airline.

XQ. 1076. Straight line; not as traveled? A. Depends on what it's for. If it's measured for overhaul, it's air line.

XQ. 1077. This would be a question of overhaul? A. For over-haul it would be measured by the horizontal distance between the center of gravity in the embankment and the center of gravity of the barrow pit.

XQ. 1078. So that no matter if we went ten miles around and a quarter of a mile across you would take the quarter of a mile across. A. Just the same as it is set out in the specification—from center of gravity to center of gravity.

Commissioner Evans: We will take a recess for . lunch until 2 o'clock p.m.

1623 (Pursuant to recess heretofore taken in the hearing of this cause and noted in the record, the taking of testimony was resumed at 2 o'clock p.m., of this date, and thereupon further proceedings as hereinafter shown were had.)

#### By Mr. Ruddiman:

XQ. 1079. In connection with Defendant's Exhibit 17-E, I believe you testified that you kept costs on the removal of five-inch rock from the em-

bankment by means of a rake dozer? A. During—pardon me.

XQ. 1080. And that that cost amounted to slightly over three cents a yard. Will you tell the Court what period it was that you kept those costs? A. I will have to refer to the exhibit to tell you.

(The witness refers to a document.)

A. (Continuing) That was from—this was just kept during a representative period in order to arrive at a figure. This was during the period of May 29, 1940, to June 21, 1940, about thirty days; and this same rate which figures out, on using this other—figures out to 2.96c per cubic yard. It was then applied to the entire yardage from which the plus-five-inch rock were removed by this method during 1939 and 1940. This is a representative period; it was average conditions; the material coming from area number one and the first part of area number two, borrow pit number two.

XQ. 1081. Does that three odd cents represent the cost of removing rocks over five inches on the embankment with a rake dozer? A. The cost, 1625 as shown there of approximately three cents per yard, covers the cost of removing the plus-five-inch stones from the embankment mate-

plus-five-inch stones from the embankment materials that were hauled in during this period from barrow pit number two on the embankment.

In this figure, only half the time of the scratch dozer has been allowed to the removal of the plusfive-inch stones, as this dozer was used to spread the materials and scarify the surface of the lifts as well as to remove the plus-five-inch stones.

This includes the entire cost of labor—that is, hand picking.

XQ. 1082. Did you also keep costs on the cost of operating the screening plant in connection with Exhibit 17-E? A. Yes, the cost of the operation of the screening plant during the period June 21, 1940, to November 6, 1940, which amounted to fourmonths and fifteen days, we did keep costs on the operation of the screening plant.

XQ. 1083. What was the unit cost that you got on that? A. As shown on Exhibit 17-F-1, which I explained in my testimony, that was revised figures for the four in here. We have a figure of 8.59c per cubic yard. That was for the screening of 591,-417 cubic yards of material.

XQ. 1084. Did I understand you to say on direct testimony that that was six cents, or slightly over six cents? A. I don't think you did.

XQ. 1085. Well, you said— A. You under-1626 stood me to say, on direct, that six and a half cents a yard was the average cost of removal by all methods during 1939 and 1940, I believe.

XQ. 1086. How did you arrive at that average? A. That average was by taking the total cost of screening, which was \$61,000, which arrives at—no, I beg your pardon. The total cost of screening, which was \$50,810, plus the cost of removing, at

three cents per cubic yard, the stones on the embankment; that is by the use of the rake dozer, for 346,000 yards of material, giving a total of \$61,067 and dividing this by 837,996 cubic yards of material, the total of which was placed, which gives us 6.50c per cubic yard.

XQ. 1087. Where did you get the rate that you used for equipment rental in connection with the Plaintiff's Exhibit 17-E? A. The rate that was used for equipment rental were rates that had been submitted to the project office by the Denver office for use in connection with this order for Change Number Three. A short time after I prepared that report, we received a revised rate and that was this Exhibit 17-F-1; the same data in that report but using the later equipment rental rates which are slightly at variance with the rates shown in there.

XQ. 1088. Let me understand that; on Exhibit 17-F, you used revised equipment rental rates? A. The equipment rental rates were revised slightly from those that were used in 17-E. Those rates were prepared in the Denver office and submitted

to the project office. The basis for the prep-1627 aration of those was, to the best of my knowledge, Plaintiff's Exhibit 17-C, with allowances made for maintenance, fuel and lubricants.

XQ. 1089. Well, were the rates that you used in both Plaintiff's Exhibits 17-E and 17-F derived from this schedule which is Defendant's Exhibit 17-C? A. This is Plaintiff's Exhibit 17-C.

Mr. Ruddiman: Those exhibits just referred to in the last few questions should be Defendant's Exhibits 17-C, 17-E, and 17-F rather than Plaintiff's.

(Question number 1089 was read by the reporter.)

A. Yes, these rates were furnished by the Denver office to the project office but the basis of their computation is Plaintiff's Exhibit 17-C, to the best of my knowledge.

XQ. 1090. I will point out to you the rate for a twelve-yard—Euclid tractor truck, appearing at page seventy of Plaintiff's Exhibit 17-E; the rate there shown is \$2.90 an hour. I will ask you whether that includes both the cost of ownership and maintenance and fuel?

Mr. Sweeney: I object, may your Honor please. May I suggest that these questions are premature in touching the rental rates. W have presented our proof in two parts; first, proof touching on the conditions, what he did; we are yet to present our proof on the second phase of the program touching rental rates.

Commissioner Evans: Off the record.

(Whereupon there was unrecorded discussion.)

Mr. Ruddiman: That question is with-1628 drawn.

XQ. 1091. In a question by the defendant you stated that adjustment was proposed by the defendant under Change Order Number Three. It is true, is it not, that costs were computed on a basis

of excavation, haulage and separation from barrow pit number two and not just upon the cost of separation? A. The Contracting Officer proposed adjustment for compensation for work, "That although there is no order or instruction of the Contracting Officer to you directing that the operation in borrow pit number two be paid for on the actual cost plus ten percent, you have submitted your claim on that, basis and adjustment on such basis is now found to be equitable." In other words, the basis of this proposal for adjustment for compensation as submitted to the Contracting Officer or by the Contracting Officer to the Contractor is based on the Contractor's statement of claim. However, the order for Change Number Three directs the Contractor to do the work and that an adjustment will be made after the Contractor submits his claim covering the additional work, not the entire work in the borrow pit.

XQ. 1092. Then it is true, is it not, the proposed adjustment does not apply merely to the cost of separation? A. That is a counter-proposal. The proposed adjustment covers the exact thing that the Contractor covered in his claim. I might add here that this exhibit that we have just been referring to, Exhibit 17-E, which I prepared and which sets up some cost data, covers only removal of plus-five-inch rocks from the material. It does not cover the

entire excavating and hauling operations in 1629 the borrow pit.

XQ. 1093. Then your testimony about unit costs of approximately three and eight cents applies only to the operation of separation, is that correct? A. That is correct; that includes the three cents for the cost of labor and equipment in removing the plus-five-inch stones on the embankment, part of which cost at least is a contract obligation of the Contractor under placing embankment materials.

Mr. Ruddiman: I object to his interpretations.

Mr. Sweeney: I don't understand that Mr. Walton is attempting to interpret the contract. He is explaining under the contract what the method is of doing this work.

Commissioner Evans: As I understood it, you deducted something from six cents and it came out about five and a half cents, didn't you?

The Witness: No, sir; we didn't deduct anything. We show an average of six and a half for the entire operation in 1939 and 1940 for removing the plusfive-inch stones from the material that was placed in the embankment and it was excavated from borrow pit number two. I stated in there that under the provisions of the contract there is some rock removal required under placing of embankment for which the contractor is paid at five cents a yard under a different schedule item.

Commissioner Evans: Go ahead, what is the next question?

By Mr. Shields:

XQ. 1094. Mr. Walton, looking at Plaintiff's Exhibit 17-D, sheet 27—

1630 Mr. Sweeney: Pardon me, you mean Defendant's Exhibit.

By Mr. Shields:

XQ. 1094. (Continued) Defendant's Exhibit 17 and ask you what would you saw as to the character of materials in there being excavated? A. The materials being excavated in this pit, coming from the bucket, is a sandy, gravelly material. They are taking the second cut.

XQ. 1095. Note that the embankment against which the excavation is made appears to be almost horizontal; does sand and gravel customarily stand in that position? A. It did in this case. We have one in this report of mine standing fifty feet high, practically vertical.

XQ. 1096. Will sand stand practically vertical? A. I didn't say it was all sand. I said it was sandy gravelly material and it is the second cut and glacial material in the first cut.

XQ. 1097. I believe you said that these photographs, Defendant's Exhibit 17-D, and 28 sheets, were typical generally of conditions as encountered in barrow pit two? A. I said that the pictures taken were taken throughout the year and were typical of conditions as being encountered at that particular time. Some of those were taken in area

number one which the government concedes was a more cobbly portion of the pit. Some of them were taken in other portions. They are representative of

the work that was being done at that time.

1631 XQ. 1098. What you call area number one of pit two contained, you contend, a lot more cobbles than were contained in other pits? A. I wouldn't say a lot more. I can give you the exact figures if you want them.

XQ. 1099. Contained more? A. Contained more.

XQ. 1100. Was there any area in pit two that didn't contain a considerable percentage of cobbles? A. Oh, a great deal of them.

XQ. 1101. So-called areas, I am talking about; not just picking out an isolated spot somewhere. A. I would say the entire second cut in area number one contained less than two percent cobbles.

XQ. 1102. Do you know whether or not it is more difficult to excavate where there are large cobbles than where they are not? A. What do you mean by large cobbles—what size?

XQ. 1103. Cobbles in excess of those permitted to be in, say, section two of the zone two of the embankment. A. There was a lot of this material that was put in Zone two embankment, upstream part, the glacial till came in there in this impervious material and there was a lot of that went in the upstream part of number two zone.

XQ. 1104. Did that or did it not have to be separated, cobbles removed the same as materials from

other sections of pit two? A. It had to have all the plus-five-inch stones removed from it, yes.

coming from pit two and going into the embankment that didn't have to be separated either by means of the separating equipment provided by the Contractor or by this rake dozer that was an arrangement that was used on the embankment? A. There was a lot of material that came out of the second cut of area number two that could have been placed without going through the separating plant and with a very nominal amount of rock removal on the embankment.

XQ. 1106. That doesn't answer my question. Read the question.

(The question was read.)

The Witness: Does that answer your question? Commissioner Evans: No, he said it didn't answer his question.

A. Well, there was a considerable quantity of material that came from barrow pit number two that could have been placed with—

XQ. 1107. I am asking you if there was a yard that wasn't separated in one fashion or another. Now you can answer that in your own knowledge. A. I have got to qualify separating. If you would call the material coming in from barrow pit number one the removal of plus—

XQ. 1108. Number two. A: I have got to qualify it.

Mr. Sweeney: May the witness please be permitted to explain his answer, if your Honor 1633 please.

Commissioner Evans: Was there any material that came out of barrow pit number two that could have been placed without having the stones taken out of it?

The Witness: No, sir; not and meet with the specifications; that is, borrow pit number one.

# By Mr. Shields:

XQ. 1109. Then in addition you mean to say there was no material coming out of two—I mean out of pit one that had to be— A. That had—

XQ. 1110. —had, likewise to be separated? A. I can say it this way: all material that came out of barrow pit number one that contained plus-five-inch stones had to have the plus-five-inch stones removed as they were placed in the embankment to meet the specifications.

XQ. 1111. Was any put through the separating plant to take the rocks out of it? A. Not to my knowledge.

XQ. 1112. Was any of it handled by rake dozers? A. I don't believe there was. I think there was a lot of material spread by the dozer that came out of barrow pit number one; in fact I know there was a lot of it.

XQ. 1113. You don't mean tho that the cobble content of materials coming from pit one would be the same in point of cobble content as materials coming from pit two?

Mr. Sweeney: We object to the form of the question. What are the facts, may your Honor please, not what do you think. A. The material coming

from pit number one was an entirely different type of material from material com-

ing from pit two with the exception of some of this second cut in area two which was comparable with lower regions of barrow pit number one. The material from borrow pit number one consisted mostly of silt and clay. Material in borrow pit number two consisted mostly of glacial till, sand and gravel.

XQ. 1114. Did I understand you, in explaining sheet twelve of Plaintiff's Exhibit 17-D—

Mr. Sweeney: Pardon me, if Your Honor please, may I ask my friend, Mr. Skields to describe correctly Defendant's Exhibit?

Mr. Shields: That's what I said.

Read the question please.

(The question was read.)

By Mr. Shields:

XQ. 1115. Did I understand you to say in describing sheet twelve of Defendant's Exhibit 17-D, that the materials being handled there by the bull-dozer were materials previously cast aside in a windrow and were not representative of materials as dumped on the embankment? A. No, sir; you didn't understand me to say that at all.

XQ. 1116. What did you say? A. The materials that are being moved with the scratch dozer are

materials that have been hauled in from barrow pit number two. The cobble in the background is a portion of the cobble filled section of the embankment and all this rock was either placed from the screen-

ing plant or by scratching out the plus-fiveinch rock from materials as hauled in from the borrow pit.

XQ. 1117. In other words, that is rock cobbles that has been obtained by separation, one means or another, from the embankment—from excavation from pit two? A. No, sir; from required excavation for structures, embankment, spillway and cut-off trench and a good portion—I didn't say all of it was; some of it probably came from the horrow pit.

XQ. 1118. This is dated May 30, 1940; was any cut-off trench being excavated at that time? A. For the past two years. That rock you were looking at was placed in 1939.

XQ. 1119. And if the picture were long enough, this would show the cobble, in a similar situation, was all across the downstream embankment placed at that time? A. Where cobble fill had been placed? Yes, this is in the diversion channel. That is filling the enclosure, making the closure in the temporary diversion channel.

XQ. 1120. The cobbles shown would be the cobbles last extracted from the excavation, wouldn't they? A. Not necessarily; no, sir.

XQ. 1121. Wouldn't the cobbles first placed be on the bottom? They wouldn't be up toward the

top of it. A. As I explained here in my testimony, the second diversion of the Pine River was made in the spring of 1940. We had a temporary diversion

channel that was considerably below the 1636 average elevation of the embankment on the

This photograph represents the embankment being placed in the number three zone in the temporary diversion channel. The embankment which is in evidence in the background and which is bordered by the cobble filled section of the embankment was placed the previous year. Does that answer it?

XQ 1122. It doesn't answer it but it gave you a chance to make a speech.

Mr. Sweeney: I object to facetious remarks by Plaintiff's Counsel.

## By Mr. Shields:

XQ. 1123. Referring to Defendant's Exhibit 17-D, sheet eleven, at the far left end of the embankment, in what appears to be a semi-circle, appears a section of cobbles, doesn't it? A. No, sir; it does not.

XQ. 1124. What is it? A. It is riprap that was hauled from the borrow pit seven miles upstream.

XQ. 1125. Showing the upstream side? A. Upstream slope of the embankment.

XQ. 1126. Would riprap be along the whole emhankment as it is at that end? A. I think there was some riprap that was placed in the immediate foreground of the picture, not visible in the picture. XQ. 1127. Mr. Walton, as a matter of fact, as it now stands, this Contractor was paid as for earth

excavation only, 23c per cubic yard, for all 1637 materials removed from pit two, whatever you call it, earth-cobble pit, or what, isn't

that true? A. That is right. The Contractor is paid under schedule item number 14, borrow pit excavation, at 23c per cubic yard.

XQ. 1128. In other words, the Reclamation Bureau authorities took the position that because this pit was called earth pit, anything coming out of it would be paid for as earth.

Mr. Sweeney: May your Honor please, that is irrelevant and immaterial because the Contracting Officer has already made an equitable adjustment in this case based upon payment of the Plaintiff for excavating cobblestone.

Commissioner Evans: The objection is overruled. Mr. Shields: Read the question, please.

(The question was read.)

A. The payment was made under earth embankment borrow excavation. Does that answer your question?

By Mr. Shields:

XQ. 1129. If that is your answer and you want to stand on it, let it go at that. A. That is the way it was paid.

XQ. 1130. And was ever a yard of cobble excavation made from the cobble pit shown on the contract drawings at the place where cobbles were to be obtained for building the slope of cobble on the downstream side of the dam? A. As I previously explained, there were 5,000 yards of material excavated from the cobble borrow pit which was paid for under earth embankment borrow pit excavation

because it was not excavated for cobbles but 1638 for earth.

XQ. 1131. In other words then, if you didn't pay for any cobbles out of the cobble pit and didn't pay for any cobbles out of the earth pit, did you pay for any cobbles out of any pit? A. Not just as things stand now. The Contracting Officer's finding of fact there sets out, I think, approximately \$45,000 which is considered an equitable adjustment for the Contractor by reason of the fact that the cobble borrow pit wasn't used and cobbles were secured from the earth embankment borrow pit number two. That was considered by the Contracting Officer as an equitable adjustment.

XQ. 1132. And that determination was made after all the work was completed and all the payments had been made, is that true, and not currently as the work was done? A. That's right; the payment, you mean, was made?

XQ. 1133. Yes. A. Payment has not been made yet.

XQ. 1134. It was tendered or offered. A. Payment was offered in the decision of the Contracting Officer; there was an attempt to reach an equitable adjustment with the Contracting Office and no basis

could be reached on which agreement could be entered into with the Contractor for this. That was the order for Change Number Two which was an attempt to do this.

XQ. 1135. And the contract provided a price of 35c for cobble and 23c for earth excavation, 1639 is that correct? A. Correct.

Mr. Shields: That is all.

Redirect Examination

By Mr. Sweeney:

RDQ. 1136. Mr. Walton, tell His Honor, please, where was the cobble fill to come from? A. The cobble fill was to be constructed of stones larger than two and a half inches in diameter coming from the required excavation for the dam; that is, the cut-off trench, the spillway, the outlet works, and the temporary diversion channel and from plusfive-inch stones removed from materials coming from borrow pit excavation and the deficiency of cobbles necessary to complete the embankment was to come from the cobble borrow pit.

RDQ. 1137. Do you recollect, please, what the estimated quantity was? That is, from the cobole pit? A. The amount shown in the specifications, estimated to come from borrow pit under item 16, was 50,000 cubic yards.

RDQ. 1138. Now do you recollect how much cobble was set up in the schedule of unit prices to be placed or moved? A. You mean was set up in order for Changes Number Two?

RDQ. 1139. No, cobbles; in the schedule? A. You mean cobbles?

RDQ. 1140. About how much? A. Well, it is under a number of different items. Item number 20,

sixty thousand yards; item 21, 275,000 1640 yards.

RDQ. 1141. In other words, 350,000 cubic yards was set up in schedule— A. 355,000, to be exact.

RDQ. 1142. 355,000? A. Correct.

RDQ. 1143. And do you recollect that the final voucher indicated approximately 330,000 yards were placed? A. The final quantity paid for on the final voucher under item number 20 amounts to 19,300 yards and under item 21 it is 311,000 yards making a total of approximately 331,000 yards.

RDQ. 1144. Now, please, with respect to item 16, on the three thousand. What is the explanation of that as compared with the large quantity of 355,000? A. It was estimated at that time that it was only necessary to get a small quantity from the cobble borrow pit in order to complete the cobble section of the embankment.

RDQ. 1145. Was that for deficiency purposes? A. That was for any deficiency that might be after all other excavations were made. However, in the order for Changes Number Two that was proposed to the Contractor, it was set up in there that we would take 250,000 cubic yards from the pit which was approximately five times that set up under item 16.

RDQ. 1146. Now, please, you were questioned by Counsel regarding the basis for rental rates; reference was made to Plaintiff's Exhibit 17-C.

1641 Tell His Honor please, is that the Bureau of Reclamation equipment rental rate for 1940?

A. Plaintiff's Exhibit 17-C is equipment rental rate schedule dated January 2nd, 1940; put out by the Bureau of Reclamation by the Denver Office.

RDQ. 1147. With respect to Defendant's Exhibit E, you testified on cross examination that the calculations did not cover the entire cost of excavation and hauling. Will you explain to His Honor the reasons why it did not? A. The cost shown in there only covers the cost in removing the plus-five-inch stones because that was the only issue that was involved in this claim. Under the contract the Contractor had to make the excavation, haul the material to the embankment; that was not a point of issue. It was the removal of the stones that was the point of issue.

RDQ. 1148. Prior to 1940, Mr. Walton, and from the beginning of the job up until June 21, 1941, the separating plant was set up in borrow pit number two. You were asked, "Were any cobbles, plusfive-inch; put through the separating plant," you answered, "No." Will you tell His Honor why you said no? A. I answered "No material from borrow pit number one," I believe.

RDQ. 1149. The material in borrow pit number one contained only a small amount of plus-five-inch

stones and these were removed by the Contractor as the embankment was being placed, by hand picking and also by the dozer kicking them over into the cobble section of the

embankment.

RDQ. 1150. With respect to the period prior to June 21st, 1940, was the separating plant adequate to handle five-plus cobbles? A. Prior to June 21st, 1940? No. As I explained in my testimony-You mean during 1940?

RDQ. 1151. No, prior to June 1940 when the plant was remodeled and set up June 21st, 1940, in pit two. A. The separating plant was used in the downstream side from the embankment during 1937, 1938 and 1939 in separating the material from the required structural excavation. The operation was not too satisfactory. I was told by Mr. Wunderlich shortly after-

Mr. Shields: I object to what he was told.

Mr. Sweeney: That is correct but this is redirect. and-

· Commissioner Evans: Objection overruled. He may answer.

Mr. Shields: Exception.

A. (Continuing) I was told by Mr. Wunderlich shortly after the plant arrived on the job it would handle approximately a thousand yards an hour. I think the maximum it ever handled was approximately four hundred yards per hour until it was set up in the borrow pit at which time the operation was more efficient.

RDQ. 1152. Will you tell His Honor why, please? A. The screening plant was—the design of it was entirely changed; that is, the method of handling the material at the plant as it was set up in borrow

pit number two, and it was more efficient. It
would handle considerably more cobble more
efficiently. It had a short length of horizontal
conveyor belt, while over in the set up in 1938 and
'39 it had a long inclined conveyor belt and it just
couldn't get the material up to it fast enough.

Mr. Sweeney: That is all, if Your Honor please.

#### Recross Examination

#### By Mr. Shields:

RXQ. 1153. You referred to schedule items 20 and 21 as showing cobble fills of 80,000 cubic yards and the other cobble fill of 275,000 cubic yards. Bearing in mind the voids in this fill that you have previously described as existing, what amount of excavation would that quantity of fill represent? A. Well, this 275,000 yards and this 80,000 yards are set up in item 21 and 20, schedule items, and represents cobble fill and cobble and gravel fill in place. That does have the voids in it.

RXQ. 1154. Allowing for those voids, what amount of pit excavation or other excavation would that represent as having been made to obtain that much cobble? A. That depends entirely on what percentages of cobble the material contained that was—I can't answer that.

RXQ. 1155. You can't answer the question? A. No.

RXQ. 1156. It would be vastly larger than the finished fill, whatever it is? A. Oh, yes; problem ably run up into millions of yards.

### Redirect Examination

#### By Mr. Sweeney:

RDQ. 1157. Tell His Honor please, in regard to the separation plant that was set up in borrow pit number two, was that on the basis of separating cobble plus-five instead of plus-two-and-a-half inches? A. The separation of the required structure excavation under the item set up in the specifications was required to be done at a separation over two and a half inch. In other words, the bars were spaced at two and a half inches in borrow pit number two. The Contractor was advised that we wanted all stones smaller than five inches in with the fine materials and stones larger than five inches to go into the cobble filled section of the embankment. The bars were spaced at about four inches in the clear which gave an equivalent to a five-inch square opening in order to meet the provisions of the specifications.

Mr. Sweeney: That is all.

Mr. Shields: That is all,

Commissioner Evans: We will take a short recess.

(Whereupon a short recess was taken.)

Commissioner Evans: The hearing will be in order.

Mr. Sweeney: At this stage of the proceedings we are temporarily withdrawing Mr. Walton from the stand in order to present certain witnesses

through whom we will offer certain exhibits 645 for comparative purposes. That is, they will

be needed by Mr. Walton in making his comparative analysis of equipment rental rates that were computed by the Bureau and rates claimed by the Plaintiff and then we'll present proof as to the actual cost incurred by the Plaintiff in similar contracts with similar equipment at about the same time, that is between '41 and '43, to establish that the allowance made by the Bureau are actually more than the Plaintiff's actual operating costs on similar work, using similar equipment.

Mr. Davis, take the stand, please.

Bruce G. Davis, a witness produced on behalf of the defendant, having been first duly sworn by said Commissioner, was examined, and in answer to interrogatories testified as follows:

# Direct Examination on Claim No. 17

## By Mr. Sweeney:

- Q. 1. For the record, Mr. Davis, state your full name. A. My name is Bruce G. Davis.
- Q. 2. Your residence? A. 798 Niagara Street, Denver.
- Q. 3. You are, at the present time, employed in the office of the Chief Engineer, Bureau of Reclamation, Denver? A. Yes, I am.

Q. 4. Tell us what your duties are. A. I am in a section which records contract progress and obtains unit construction costs on contract jobs.

Q. 5. About how long have you been employed by the Bureau of Reclamation? A. On the present employment, approximately a year and three months, prior to this time I worked for them possibly six and a half years.

Q.6. Prior to that time six and a half years, what were your duties, what projects? A. I was on the Boulder Dam Project construction 1933 through 1940. At this time I was with the Bureau of Reclamation.

Q. 7. That project was in charge of the Chief Engineer in Denver? A. Chief Engineer in Denver.

- Q. 8. Tell His Honor please, in some detail, what practical experience you have had in matters of this kind. A. Batchelor of Science in civil engineering and experience in civil engineering primarily over construction, 1933 until the present. I have been on several construction jobs; Boulder Dam, Panama Canal job, I've worked for the Public Roads Administration and the Navy Department and then returned to the Bureau of Reclamation on this cost and progress job in Denver.
- Q. 9. You have told His Honor you were in Panama. Were you employed by the Panama Canal? A. By the Panama Canal and office engineer on Gatoon Third Locks Project.

Q. 10. Tell His Honor during what period? A. That was from approximately January of 1941 through November of 1943.

anything to do in connection with the performance of your duties as having any relationship with Plaintiff? A. At that time Martin Wunderlich Construction Company and Oaks Construction Company ventures had the contract for the excavation of the Gatoon Third Locks. I was in contact with that job as office engineer of that job.

Q. 12. As to the character of equipment used by the Plaintiff in the Panama job, are you familiar with that and also with the character of equipment used at the Vallecito Dam job? A. I am not familiar with the Vallecito Dam job.

Q. 13. With the equipment used on it? A. The equipment used, I am not familiar; I can't testify as to that equipment. I am familiar with the earth moving equipment and the equipment used at the Panama job, it was standard equipment—D8 tractors and small Euclid trucks, twelve yards, and, I believe some sixteen yard Lima draglines—standard earth moving equipment.

Mr. Shields: Mr. Commissioner, I interpose an objection to any line of questioning about experience in Panama or anywhere else as it has no bearing whatever on this hearing.

Mr. Sweeney: If Your Honor please, I am laying the foundation for later development of certain points in regard to equipment rental rates and the equitable adjustment made by the Chief Engineer in Denver via the Contracting Officer in this case.

These questions are, of course, wholly pre-1648 liminary.

Commissioner Evans: The objection is over-ruled.

#### By Mr. Sweeney:

Q. 14. With respect, please, to the kinds of equipment that are used in ordinary earth moving or excavating jobs, is it substantially the same or is it different? A. Substantially the same on all earth moving jobs, in my experience.

Q. 15. With respect to the job in Panama, did you see the equipment as it came to the job and can you tell His Honor the condition of it when it arrived? A. Yes, I saw the equipment as it first arrived on the job.

Q.16. Tell what you saw, please. A. The equipment that came in first was largely used equipment which was in good operating condition. It came directly from the boats to the project and went to work. At a later date new equipment was also added to the used equipment which the contractor had moved in.

Q. 17. Have you told his Honor, please, just what duties you performed in the office in Panama Canal in connection with the work that was at that time being performed by the Plaintiff in this case? A. As office engineer I was responsible for supervision of all computations of all jobs, pay estimates, and

for keeping of the costs on the contract and, on that particular job, we had a section which kept contractors' unit costs in connection with the work.

Q. 18. Now, with respect to the Plaintiff in this case, did you keep such records at that time? A. We kept equipment cost records for Martin Wunder-

lich Company, in connection with the exca-1649 vation worksthey were performing.

Q. 19. I show you what has been marked Defendant's Exhibit 17-R for Identification. Tell his Honor what it is.

. (The document above referred to, marked Defendant's Exhibit No. 17-R for Identification, is filed in connection with this case.)

A. This is a report entitled, "United States, The Panama Canal, The Third Locks Project, New Gatun Locks Excavation and Apurtenant Work Equipment Operating Data." This report was prepared from data which was gathered under my supervision and direction; and was assembled by a section under my supervision and direction; I have costs actually determined on the job, of operating the contractors' heavy equipment.

Mr. Sweeney: It is now offered, if Your Honor please, for comparative purposes for use by Mr. Walton in connection with analyses that he will make of rates as calculated by the Chief Engineer, the rates as claimed by the Plaintiff and we will show that the actual operating costs, if Your Honor please, of the Plaintiff in this case on the Panama

job were actually less than the maintenance allowances by the Chief Engineer in connection with his equitable adjustment.

Mr. Shields: I object to the use of this exhibit for any purpose. It relates to a later period, 1943, to another job, work in an entirely different climatic situation, work under engineers not comparable to the bullheadedness of Mr. Burns—

Mr. Sweeney: That is unjust and unfair.

Mr. Shields: And not evidential for any purpose in this case.

1650 Mr. Sweeney: Have you concluded, Mr. Shields?

May we point out, if Your Honor please, that the objection, as noted by my opponent, in this particular aspect, is not well founded; for as the war progressed, costs increased and therefore his cost would have been greater in 1943.

Commissioner Evans: I just want to get more in my mind about that. What sort of costs are in this report? Are the fuel costs?

The Witness: It is the fuel costs, to give you the background—

Commissioner Evans: Of the operating equipment?

The Witness: Operating equipment.

Commissioner Evans: Labor costs?

The Witness: Labor cost, repair parts, repair labor, fuels, lubricants, all items which made up the operating cost of equipment including depreciation.

## By Mr. Sweeney:

Q. 20. Does the cost include the depreciation? A. Yes, sir.

Q. 21. All items of cost? A. Yes.

Mr. Shields: Just as well get some data about the operations in Japan or Timbuctoo or anywhere else.

Commissioner Evans: Let the record show that the objection is overruled. In permitting this evidence to go into the record, I should like to warn Counsel for the Government that it will carry, in my mind, very little weight unless you establish better foundation for the similarity. We don't know what the relative costs were in Colorado in 1939 and in Panama in 1943 of labor, parts, fuel, or anything else.

1651 Mr. Sweeney: That is what we propose to do through Mr. Walton.

(The document above referred to, previously marked Defendant's Exhibit No. 17-R, 23 pages, for Identification, is now received in evidence and filed in connection with this case.)

Mr. Shields: Was this a cost-plus job?

The Witness: No, sir; just unit price contract.

Mr. Shields: Was it any part of your duty to find out exactly how much money the contractor was spending on the job?

The Witness: In this particular contract that is in the specifications; we had an escalator clause which reimbursed the contractor for labor, materials and freight and we therefore kept complete records of all his costs in a section of approximately twenty men whose duty it was to collect the contractor's costs.

Mr. Shields: But where did that make it your duty or any part of your duty to find out how much he was spending for gas or oil or other equipment?

The Witness: In connection with the escalator clause we had to know how much he paid for it in order to reimburse him. However, this cost finding was separate from that in as much as the government, for their own purposes, determined—the wanted to keep complete costs of the job, find out what it was costing the contractor and maintain such records.

Mr. Shields: Where did you obtain the data about costs, from the contractor?

The Witness: No, we obtained from the contractor certain information; we obtained certi1652 fied copies of payrolls, certified copies of all purchase vouchers, certified copies of all shipping vouchers, we maintained men in the field who checked the contractor's men for distribution of their time and maintained a man in the contractor's shop to check labor on equipment repair and got copies of the repair tickets made out by the contractor's foreman and we got our information from exactly the same source the contractor did.

Mr. Shields: Whether your information was correct\_would depend on whether the contractor's reports were correct.

The Witness: No, we counted the men, knew their hours, knew their rates as well as the contractor knew them, the force actually working on the job. The only records the contractor gave us were certified copies of documents such as payrolls.

Mr. Shields: You didn't get the cost of equipment from the contractor's records?

The Witness: That is the cost of new equipment? Mr. Shields: Yes.

The Witness: I don't know for sure. When the contractor purchased new equipment we took book value on it.

Mr. Shields: You didn't get the cost per hour of operating a given piece of equipment from the contractor's records?

The Witness: No, we determined that independently.

Mr. Shields: And whether or not you determined it correctly would depend on how complete your information was?

The Witness: That is true.

Mr. Shields: What would you say, do you know, as to whether depreciation in the Panama climate would be comparable to the depreciation of similar equipment in high altitudes such as the Colorado Rockies?

The Witness: Without more information, I wouldn't be qualified to say. The wear and tear on it would depend on the type of—

Mr. Shields: You wouldn't figure the depreciation would be the same? The Witness: Not necessarily the same, no, sir. Mr. Shields: Depend on wear and tear as well as the climate on the various equipment used?

The Witness: That's right.

Mr. Shields: I notice you have one sheet, number twelve, of Defendant's Exhibit 17-R which purports to list in one column the name of the different types of equipment and in the second the number of such items; third, repair labor; fourth, repair parts; fifth the depreciation and then the total of those three items and then in the final column "Credit, Rentals," and under the later column the amount of the rentals seems to equal the total of the amounts charged off for repair, labor, parts and depreciation, is that correct?

The Witness: That appears to be correct, yes. Mr. Shields: So that if the contractor spends so much for labor and so much for repairs and so much for depreciation, and rents the equipment for the total of the sum so spent he wouldn't be getting anything for the use of the machine, would he?

The Witness: If he rents it for this figure?

Mr. Shields: Yes.

The Witness: No, sir. I submit there that you are taking only one account and there are three accounts; plant account, which is the original value of the plant plus any major improvements in the plant; the plant rental account which is the rental figure which you have; and the plant operation account, which is the fuel and other operating costs.

Mr. Shields: What would you say probably makes up plant rental on equipment of this character?

The Witness: I would have to ask you to define "plant rental." It means a lot of things. If it means the same as "equipment ownership expense", "A.G.C." schedule, plant rental is an extremely loose term.

Mr. Shields: Well, you have used the term yourself here on sheet twelve which I previously invited attention to What is the meaning as there used? The term "plant rental?"

The Witness: This was a plant rental account to which was charged repair labor, repair parts, depreciation—this depreciation was cleared from the plant account which was the original cost of the plant plus transportation plus impedimenta in turn, plus the plant rental cleared to plant operating account which included other costs of operation (fuels, lubricants, and so forth) that was cleared directly, and pay items. Plant rental here included hours of repair labor or parts and depreciation.

Mr. Shields: Nothing for the actual use or operation?

The Witness: Nothing as there set up.

1655 Mr. Shields: Mr. Wunderlich did a good job at Panama?

The Witness: He did an excellent job.

By Mr. Sweeney:

Q. 22. You were questioned regarding the cost of the contractor's equipment in this report. Tell

His Honor please, if the report itself shows the manner in which the cost of the equipment was determined? A. On page nine of Exhibit—Defendant's Exhibit 17-R, the method of computation of plant rental rates is set up in item four of this paragraph which states, "The original cost shall be the actual cost of the plant to the contractor, if no cost to the contractor, the item shall contain an appraised value plus cost of examining."

Q. 23. That is based upon an understanding or agreement between the parties? A. My recollection is that in almost every case we received information from the contractor as to the original cost of the plant or the cost which they set up in the partner-ship.

Q. 24. Tell His Honor please, if the Plaintiff's superintendent on that job, whom I believe was Mr. Stewart, the same man who supervised the performance of the Vallecito Dam, did he have any conversation as to whether or not the costs involved here were right or wrong? A. We directly discussed these costs and Mr. Stewart, at the end of the month, we gave him a copy of the report and my recollection is that Mr. Stewart never disagreed with the cost and in fact, in general, thought they

reflected the actual cost of the work.

1656 Q. 25. Now, please, you were questioned regarding the manner of depreciation. Something was said regarding conditions in Panama, at a very low level and close to the sea as compared

to the work in high elevations, such as Vallecito. Now tell His Honor please, did you follow the straight line method of depreciation or some other system? A. We followed a straight line method of depreciation.

Mr. Sweeney: That is all, Your Honor.

Mr. Shields: That is all.

Commissioner Evans: Did I understand you to testify that in taking the capital cost of the equipment, you used a book value or what did you use?

The Witness: In general, on cases of new equipment, we received copies of the bills paid to the company on equipment to which we added freight and kept copies of all freight bills and set them up as cost to the contractor.

Commissioner Evans: Did that cost to the contractor represent capital outlay?

The Witness: Yes, sir.

1657

Commissioner Evans: As to used equipment?

The Witness: As to used equipment, we were sometimes able to get—I believe in general we were able to get data as to the value, and the company and the parties agreed on it and if this appeared reasonable, we accepted it, if no figure was available on equipment on the job we set up an appraisal and we worked from that basis.

Commissioner Evans: You had no reference, then, in particular to the value at which

the equipment was carried on the books of the

The Witness: Except in case of new equipment our value would be the same as his.

Commissioner Evans: Used equipment?

The Witness: Used equipment, not necessarily, unless they had a reasonable figure they established between themselves and we accepted it.

Commissioner Evans: Very well. Any questions? (No response.) That is all.

(The document above referred to, marked Defendant's Exhibit No. 17-R, is filed in connection with this case.)

1658 Russell See, a witness produced on behalf of the defendant, having been first duly sworn by said Commissioner, was examined, and in answer to interrogatories testified as follows:

Direct Examination on Claim No. 17

#### By Mr. Sweeney:

- Q. 1. For the record, Mr. See, please state your full name. A. Russell See.
- Q. 2. Your address please, Mr. See. A. 3004 Ash Street, Denver, Colorado.
- Q. 3. And you are employed in the office of the Chief Engineer? A. Yes, sir.
- Q. 4. Bureau of Reclamation, Denver? A. That's right.
- Q. 5. And you have been there for how many years? A. About thirty years with the Bureau of Reclamation.

- Q. 6. Tell His Honor, please, what your present duties are. A. Head of the division of General Engineering that takes care of contract matters and issues—takes care of contract matters and other matters connected with general engineering.
- Q. 7. During the period that this contract was performed please, 1938 to 1941, what were your duties in the office at that time? A. I was in charge of the contract adjustment section of the Chiek Engineer's office.
- Q. 8. And did that work relate to matters concerning claims for additional compensation 1659 by the contractor in this case? A. Yes, sir,
- Q. 9. Now there has been offered in evidence Plaintiff's Exhibit 17-C, the 1940 Bureau Rental Rates. Defendant's Exhibit 17-C; did you have something to do, please, with the preparation of these rates or do you use them in connection with matters coming before your office involving claims? A. Yes, these rental rates were prepared under my direction, within my section in the Bureau.
- Q. 10. Now, in regard to them, please tell His Honor in just what way were they prepared? That is, what do they reflect? What is their purpose? A. Well, these were based on the Associated General Contractor's Report of 1936 and they were intended to set up a working schedule of working rates for equipment which the government rented from contractors for use on cost-plus jobs.

- Q. 11. Will you explain, please, the so-called "A.G.C." formula for rental rates? How are such rates determined? A. Well, the A.G.C. formula was set up to cover the ownership expense for contractors on equipment. It covered depreciation, the cost of major repairs, the cost of interest, insurance and taxes. I mentioned depreciation—it was also included.
- Q. 12. In other words, please, in preparing the Bureau schedule you used, as stated; as the basis thereof, the Associated General Contractors of America, Incorporated, ownership expense as Plaintiff's Exhibit 17-B? A. Yes, sir; that is cor-

rect. This is the 1937 edition. That is what 1660 we used as a basis.

- Q. 13. We note that the Bureau schedule contains some modifications or additions to the factors that are set up in the A.G.C. rates with respect to the determination of monthly shift rates on an hourly basis. Will you explain that to His Honor please? A. We set up, in addition to our monthly rate, an hourly rate and also an additional hourly rate that is intended to cover the use of equipment for short periods where it is moved in for a matter of a few hours or just a few days and that rate was two and a half times the hourly rate under the monthly schedule set up.
- Q. 14. Now you are only testifying, Mr. See, please, to matters involving the general application of these rates; another witness will explain the detail computations.

Now, with respect to the claim in this suit, and particularly claim 17, are you familiar with the method of procedure that is followed in calculating those rates? A. Yes, I was.

Q. 15. Tell His Honor what that was. A. The rate followed there; the method followed there was to use monthly rates rather—I would say it was turned in on an hourly base rate and we applied the shift rate shown in the schedule, which is one-thirtieth of the monthly rate, to the day shift. The night shift was on a two-shift basis, we applied the extra shift rate shown here.

Q. 16. What were you following, some standard formula? A. That is the A.G.C. formula,

depreciation and taxes and insurance. They are carried in the daily rate. So the extra shift rate covers only the matters of the depreciation—additional depreciation and items that would be involved, but insurance and taxes would all be covered in the daily rate so the extra shift rate was figured as called for in the A.G.C. schedule as one-half the daily rate.

Q. 17. Now, please, we note that the Bureau has been making some additional allowances for lubricants, fuel and maintenance. Now, will you explain that to His Honor; as to what that is based upon? A. That is based on the Bureau's experience up to that date of the consideration of this claim and also to the information we got from State Highway

schedules, the Forestry Service and, I believe, two or three other sources of information. I think the University of Nebraska gave us some costs on lubricants and different types of fuels and lubricants in some of their experimentations.

Q. 18. Did you mention, please, some investigations by the Colorado Highway Department? A. Yes, the Colorado Highway Department in connection with their work in similar localities had a lot of data on costs of operating equipment.

Q. 19. We note, please, that the Contracting Officer in the determination of his equitable adjustment has calculated his allowances particularly for

the separation plant, using a six-year life basis. Will you explain to His Honor why

that was done? A. Well, we had some items of similar equipment in here and, I believe, I can't tell you the exact items, but we took the useful life as given in this schedule and based the rate we allowed for that plant upon the rate shown in this schedule.

Q. 20. Now, please, Mr. See, you have been in the Bureau of Reclamation for a great many years, you are familiar with the respective duties of the Contracting Officer and many construction engineers; they operate under his supervision. With respect, please, to the duties of a construction engineer on a job similar to the one in this suit, what authority, if any, does such a construction engineer have with respect to negotiating with the contractor

for payment of additional amounts of compensation for work under the contract?

Mr. Shields: I object to that as outside the scope of this hearing.

Commissioner Evans: Objection is sustained.

By Mr. Sweeney:

Q. 21. Mr. See, please, the plaintiff has offered in evidence a document which purports to be a memorandum of rental rates that he says was entered into between the Contracting Officer and himself. With respect to such an alleged agreement, has the Construction Engineer on the job any authority to make such an agreement on the job? A. No, sir.

Mr. Shields: It is certainly for the Court to determine what the authority of the Construction En-

gineer is as representative of the govern-1663 ment, not his witness.

Q. 22. As a matter of practice, generally?

Commissioner Evans: Off the record.

(Whereupon there was unrecorded discussion.)

Commissioner Evans: Let the record show that, following a discussion off the record, it has been agreed by government Counsel to change the form of the question to elicit the practice in the office.

Q.23. (By Mr. Sweeney) Tell His Honor, please, what is the practice of the Bureau offices regarding, say, the rental rates that are claimed by the Contractor for additional work on a job of this kind? A. Well, any rates which were agreed to in the field.

would have to be what we call "a tentative agreement;" that is, conditional agreement subject to the Chief Engineer's approval. The Chief Engineer is the Contracting Officer. That has always been our practice on all our jobs.

Q. 24. Just what does the Construction Engineer on the job do, say, regarding claims submitted to him by a contractor? Such as in this case? A. Well, ordinarily he will transmit copies of those to the Chief Engineer, Contracting Officer, for further instructions on how to proceed with the handling of the claim.

Q. 25. Does he, in submitting that, make some recommendations? A. Frequently he does and sometimes he does not.

Q. 26. And if it involved a claim for additional work, what would he have to guide him in submitting his recommendation on additional cost, assuming he has experience as an

engineer? A. He would have to have a good many years experience.

Q. 27. What fixed rental rates would he have to guide him? A. All our engineers have a copy of this rental rate.

Commissioner Evans: Before leaving that particular topic, in the practice of construction engineers in the field, has it been the practice, in your observation, for a construction engineer to, from time to time, recommend rates which are departures from the established schedule of your office as being his suggestions for equitable adjustments?

The Witness: No, sir; I don't think so.

Commissioner Evans: It has not been? Very well.

Cross Examination

#### By Mr. Ruddiman:

Q. 28. I didn't understand just how you computed the hourly rates used in claim 17 in this case. A. The hourly rates went back from the monthly rates. The monthly rate is set out for thirty days, eight hours; that would be 240 hours, so we took one two-hundred-fortieth of the monthly rate as the hourly rate for the day shift.

Q. 29. And you used half that rate for the second shift? A. Yes, sir.

Q. 30. And you applied those rates to the actual hours of operation of the equipment, that is true?

A. Yes.

1665 Q. 31. Does the Bureau ever use its monthly rates? A. Yes, we do where we rent equipment for a period of months.

Q. 32. I take it that when the monthly rate is used, the contractor is paid for every day of the month, no matter whether it is Sunday or the equipment is not being used for rain or some other reason, is that true? A. That is true.

Commissioner Evans: Did you understand it?

The Witness: I believe I understood it.

Mr. Sweeney: Read the question to the witness, please.

(The question was read.)

### By Mr. Ruddiman:

- Q. 33. In other words, he is paid in full monthly rates? A. That is right.

Q. 34. Suppose a contractor was working over a period of eight months. Would that monthly rate be multiplied by eight to get the total due for that eight-month period? A. If the equipment was being used continuously on that job it would be, yes. Continued use of equipment for eight months.

Q. 35. By "continued use" do you mean eight hours every day of those eight months? A. Yes, except when the weather is bad or something—a legitimate stoppage.

Q. 36. Stoppage for repairs? A. Not for major repairs.

1666 Q. 37. How about field repairs? A. Yes, we allow for field repairs.

Q. 38. How about Sundays? A.Well, Sundays—as I understood on this job this was a seven-day operation.

Q. 39. Well, if you were on a six-day operation? Mr. Sweeney: If your Honor please, that is irrevelant and immaterial. That is a seven-day job.

Mr. Ruddiman: I am testing this man's qualifications as an expert.

The Witness: In a six-day operation we ordinarily pay the monthly rate.

#### By Mr. Ruddiman:

- Q. 40. No deductions for not working on Sundays, is that correct? A. (The witness nods head affirmatively.)
- Q. 41. Where did the Bureau get its figures for maintenance and repairs of equipment, the hourly rate to be used? A. From various sources; from our experience on government force work and from the State of Colorado in their highway operations, Forestry Service in Construction Operations and I believe from some other miscellaneous sources, I can't give you the details.
  - Q. 42. None of that is from contractors' usage of equipment, is it? A. Yes, sir.
- 1667. Q. 43. It is? A. Most of it is; the State Highway Department of Colorado is practically all from contractors' equipment.
- Q. 44. Do you know whether the State of Colorado knows what the contractors' expenses are? A. No, I don't.
- Q. 45. What would you say is a fair maintenance rate for a Caterpillar tractor? A. What do you mean, rate per hour?
- Q. 46. Rate per hour. A. Off hand—we have the figures, we can look them up by reference.
- Mr. Sweeney: To aid the witness, Your Honor, please, we are showing him schedule of equipment rates and operation allowances to be offered into evidence by Mr. Walton; to aid the witness in answering the question.

(The witness refers to a document.)

The Witness: You want me to answer that question?

Q. 47. Will you answer the question? A. Repeat the question please.

(The question was read.)

A. We have RD8 tractors—caterpillar tractors; the maintenance hourly rate is 24c determined by the Bureau.

Q. 48. Would you say that the hourly rate on a caterpillar tractor would be about the same as on a Lima dragline, model 901, two and a quarter cubic yard? A. I am not able to say whether it would be or not.

1668 Q. 49. You don't know whether they would be comparable in rate or not? A. No, sir; however, we give a rate here of 30c an hour in this tabulation for a 901 drag line three and a half cubic yard—it is given here as 30c an hour as compared to 24c for an RD8.

Q. 50. Approximately what would a Lima dragline cost new? A. The capital value given here is \$39,000.

Q. 51. You can maintain that on 30c an hour? A. That is what our figures show.

Q. 52. And approximately what does an RD8 Caterpillar tractor cost new?

Mr. Sweeney: We object, may Your Honor please, to this line of questioning on the ground that it is entirely outside the scope of direct exami-

nation. These calculations will be presented by Mr. Walton. The present witness was called to testify as to what is the standard or general practice.

Commissioner Evans: Objection overruled.

(The question was read.)

A. The valuation begins here at \$7,900 \$7,905.

Q. 53. And you say the hourly rate for maintenance of that should be 24c? A. Yes, sir; that is what our tabulation shows.

Q. 54. In other words, do you think it is reasonable that the rate for maintaining a Caterpillar tractor should be only slightly less than that for a Lima dragline? A. I think it is entirely possible.

Q. 55. Do you think it is reasonable? A. 1669 Yes, sir.

Mr. Ruddiman: That is all.

Redirect Examination on CLAIM No. 17

#### By Mr. Sweeney:

Q. 56. Tell His Honor, please, what is the practice of the Bureau of Reclamation when setting up rental rates for use in cost-plus work orders. A. Well, it is similar to what we followed in this case. We take the equipment rental rates from our schedules with the type of equipment used and use the same procedure we have in this case.

Mr. Sweency: That is all on redirect examination, if Your Honor please.

I have some certified papers to offer while Mr. See is on the stand.

I now offer Defendant's Exhibits 17-s through.

17-V.

They are copies of letters dated August 31, 1940, from the Contracting Officer to the Commission, submitting three copies of the proposed Form Three, Order B, approved by the Secretary of the Interior.

17-S one to three inclusive.

17-U, pages one to four inclusive.

17-T, pages one to three inclusive.

17-V, pages one to three inclusive.

Mr. Shields: No objection.

Commissioner Evans: They are so re-1670 ceived.

Mr. Sweeney: Defendant's Exhibit 17-T, pages one to three, is the approved order of changes by the Secretary of the Interior.

Mr. Shields: No objection.

Commissioner Evans: So receive

(The document above referred to, marked Defendant's Exhibit No. 17-S, is filed in connection with this case.)

(The document above referred to, marked Defendant's Exhibit No. 17-T, is filed in connection with this case.)

Mr. Sweeney: Defendant's Exhibit 17-U, if Your Honor please, is a document consisting of four pages. This is a communication from the Office of the Solicitor and is to the Commissioner and is

asking for certain information regarding the manner in which the equitable adjustment was calculated.

Mr. Shields: Defendant's Exhibit 17-U one, we object as being irrelevant to any issues being a a letter written long after this whole transaction.

Mr. Sweeney: For your information, Your Honor, this letter was before the Secretary of the Interior who made his administrative findings. He is asking for certain information as to how certain rental allowances were arrived at.

The date of the Administrative Findings is July 7th.

I am offering this to explain just how these items were calculated.

Commissioner Evans: Objection overruled; document is received.

1671 . (The document above referred to, marked Defendant's Exhibit No. 17-U, is filed in connection with this case.)

oMr. Sweeney: We next offer, if Your Honor please, Defendant's Exhibit 17-V, which is a letter dated May 5, 1943, from the Chief Engineer, S. O.-Harper, to the Commissioner and it is in response to the previous request for information.

. Mr. Shields: The same objection.

Commissioner Evans: Objection overruled.

Mr. Shields: Exception.

(The document above referred to, marked Defendant's Exhibit No. 17-V, is filed in connection with this case.)

Commissioner Evans: At this time we will adjourn until 9:30 in the morning.

(Whereupon, an adjournment was taken until 9:30 o'clock, a. m., Tuesday, November 19, 1672 1946.)

(The parties met, pursuant to adjournment, at 9:30 o'clock, a. m., on the 19th day of November, 1946, in the Court Room of the United States Court of Appeals, Post Office Building, Denver, Colorado. Appearances were as previously noted. Mr. Harold E. Hastings, a certified shorthand-reporter, previously duly sworn by the Commissioner, was present.)

And thereupon, the following proceedings were had:

Myron Nixon, a witness produced on behalf of the defendant, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

Direct Examination on CLAIM No. 17

## By Mr. Sweeney:

- Q. 1. Mr. Nixon, please, for the record, state your full name. A. Myron Nixon.
  - Q. 2. Address? A. Wheat Ridge, Colorado.

- Q. 3. You are employed by the defendant and perform your duties in the office of the Chief Engineer, Bureau of Reclamation, Denver? A. That is right.
- Q. 4. Tell His Honor, please, what duties you perform—the nature of them? A. My duties consist of helping get out extra work orders and changes under contract adjustment, supply contracts and construction contracts.
- 1673 Q. 5. And how long, please, have you been performing duties such as that? A. About eight years now.
- Q. 6. Now just indicate to His Honor briefly your educational background, training and experience; your qualifications to do this work. A. B.S. degree in mechanical engineering, 1930, from the University of Colorado. I worked for the Aluminum Company of America one year and, following that, periods of employment with the Great Western Sugar Company, Holly Sugar Company, Bureau of Public Roads and the Reclamation Bureau.
- Q. 7. Now please tell His Honor, did you have something to do in connection with claims that were presented by the Plaintiff in this case? A. Well, oh,—
- Q. 8. Just tell what you did in connection with the claims which Plaintiff presented in this case. A. My work consisted of helping to establish these rental rates for Plaintiff's claim in borrow pit number two.

Q. 9. And in connection with that please tell His Honor what the usual practice is in the Bureau with respect to doing that; what standard do you have, to do that? A. The usual practice is following our own equipment rental schedule which is based on the contractor's ownership expense published by Associated General Contractors.

1674 Q. 10. And those documents are in evidence, please, as Plaintiff's Exhibits 17-C and 17-B? A. Yes.

Mr. Sweeney: We will mark these for identifica-

(The document above referred to, marked Defendant's Exhibit No. 17-W for identification, is filed in connection with this case.)

(The document above referred to, marked Defendant's Exhibit No. 17-X for identification, is filed in connection with this case.)

(The document above referred to, marked Defendant's Exhibit No. 17-Y for identification, is filed in connection with this case.)

## By Mr. Sweeney:

Q. 11. I show you a document marked Defendant's Exhibit No. 17-W, pages one to eight inclusive. Tell His Honor please what it is? A. This is a transmittal letter from the Chief Engineer to the Contractor enclosing tabulation showing detailed basis of determination of equipment rental rates

in connection with order for Changes Number Three.

Q. 12. Refer to the initials in the upper right hand corner, please, "MEN"—A. "MEN"?

Q. 13. Tell His Honor, did you dictate this letter?

A. Yes, I dictated this letter.

Q. 14. And with respect to the data, did you prepare that? A. Yes, sir.

Mr. Sweeney: It is now offered, if your Honor please, to illustrate the testimony to be given by the witness.

Mr. Ruddiman: No objection, except that I believe this letter is already in evidence.

Commissioner Evans: It is so received.

(The documents above referred to, previously marked Defendant's Exhibit No. 17-W for Identification, is now received in evidence and is filed in connection with this case.)

## By Mr. Sweeney:

Q. 15. I show you a document, please, marked Defendant's Exhibit 17-X, pages one to seven inclusive. Tell His Honor what it is. A. This is a letter from the Construction Engineer to the Chief Engineer, Denver office, showing or enclosing the project draft of adjustment compensation and order for Change Number Three. It contains allowances proposed by the Chief Engineer and these—there have been some corrections; there are three sets of figures contained here, typed, one penciled black figures and penciled red figures.

Q. 16. Explain them to his Honor, please. A. The typed figures are those which were made up on the project. They are proposed allowances and the penciled corrections in here in black pencil are corrections made by this office to agree with changes made in the method of computing capital values of the screening plant and a few other corrections. We found these on—

Q. 17. You are referring, please, to page seven?
A. Yes.

1676 Q. 18. Of the document? A. Corrections are shown on page three but page seven shows the tabulation of all the equipment rental rates and allowances.

Q. 19. Now, referring to page seven, please, have you explained to His Honor what those penciled figures are and who made them? A. I made these black penciled figures. The red pencil and ink figures, however, are those made to agree with the final cross section taken on the project.

Q. 20. Will you note the initials "JRW" in the upper right hand corner of this? Who prepared that? A. It was prepared by Mr. Walton.

Mr. Sweeney: The document is now offered, if Your Honor please.

O Cross Examination on CLAIM No. 17

#### By Mr. Ruddiman:

Q. 21. Do I understand you to say that the type-written figures were the figures received from the field office? A. Yes, that is correct.

Q. 22. And the penciled figures, who prepared those? A. Those penciled figures are my corrections after it was received in this office.

Q. 23. And the figures in red, who prepared those? A. Those are figures placed on there by Mr. Walton, in the project office, to agree with the final cross section. They were final figures, I understand.

Those were used in the final adjustment of compensation.

Q. 24. And in connection with the allowances for the use of equipment, were both the typewritten figures and the penciled figures based upon the Bureau's schedule of equipment rental rates? A. Yes, everything, as I understand it, was based on our equipment rental schedule.

Mr. Ruddiman: I am going to object to this as an intra-departmental communication which was never communicated to the Plaintiff.

Commissioner Evans: Objection overruled. The document is received subject to identification by Mr. Walton as to the figures stated to have been made by him.

Mr. Ruddiman: Exception.

Commissioner Evans: Note the exception.

(The document above referred to, previously marked Defendant's Exhibit No. 17-X for Identification, is now received in evidence and filed in connection with this case.)

## Redirect Examination on Claim No. 17

RDQ. 25. I now show you a document marked. Defendant's Exhibit 17-Y, pages one to seven. Tell His Honor what it is. A. This is a transmittal of letter from Chief Engineer to the Contractor enclosing the adjustment of compensation finally issued.

Mr. Sweeney: It is now offered.

Mr. Ruddiman: No objection except that it has already been introduced.

1678 Commissioner Evans: So received.

(The document above referred to, previously marked Defendant's Exhibit No. 17-Y for Identification, is now received in evidence and filed in connection with this case.)

#### By Mr. Sweeney:

RDQ. 26. Refer, please, to Defendant's Exhibit 17-W, pages one to eight, and explain in detail how you calculated the equipment rental rates set forth therein. A. Well, in general, the procedure was to follow the equipment rental rates set out in our schedule for the bear rental of the equipment, as much as this job operated on a two-shift basis—that is, sixteen hours a day, thirty days a month. We took the two shifts as a first shift rental plus the second shift, which is one-half of the first shift rental, and divided that by sixteen to get the comparable hourly basis. That is on a shift rate; I multiplied that by that and got an hourly rental

and maintenance and repairs.

RDQ. 27. Refer, please, to page one and, I believe, the first item, which is caterpillar tractors. Will you explain in detail to His Honor the calculations set forth under the various columns and tell him what they mean; what they reflect? A. Well, in figuring the total rate for caterpillar tractors, model RD8, 95 horsepower, we took, in this case as in every other case, I believe, the new capital

values. That is, we figured new equipment laid down in Salt Lake City.

Commissioner Evans: New equipment

The Witness: Laid down in Sait Lake City.

Commissioner Evans: Why Salt Lake City?

The Witness: We fixed that as the one point in the United States where freight rates would be the highest, giving the Contractor the benefit of the highest freight charges we could.

Commissioner Evans: All right.

A. (Continuing) On the first shift rate, at that time, we took the freight rate of \$15.40 per shift.

Commissioner Evans: You spoke of a bear rental as a basis. What does that mean?

The Witness: Rental for the equipment alone without any operating cost included.

Commissioner Evans: That is based on values of the equipment?

The Witness: Capital values, yes, sir.

Commissioner Evans: Proceed.

A. (Continuing) The second shift rental, according to the equipment rental schedule of the Associated General Contractors', is one-half of the first shift rental; so that is the next figure. The total rental for two shifts is \$23.10 for two shifts.

The next figure is maintenance. That figure is an average figure that we have found, through experience on government force account work and work

performed by other government agencies— 1680 Forest Service, Bureau of Public Roads, and

from State Highway Departments—to be reasonable for that type of equipment and that type of work; took that as five percent of the hourly rate.

The fuel and lubricants we drew there again on our experience with similar equipment on similar jobs. That covered fuel, lubricants, grease. That brought the total rental, operation, two-shift basis, to \$34.94. That figure, we reduced to an hourly basis by dividing by sixteen—that is, two shifts—which brought it down to a comparable figure of \$2.18 per hour.

Commissioner Evans: Restate the elements in that rate valuation. Your allowances there are for depreciation, is that right?

The Witness: The allowance there is for depreciation, taxes, insurance, major repairs, storage, all those factors enter into it.

Commissioner Evans: The all go into the bear rental. What is the other element?

The Witness: Other elements are maintenance and repairs.

Commissioner Evans: Maintenance? What does maintenance include?

The Witness: That includes minor repairs.

Commissioner Evans: Minor repairs?

The Witness: Anything necessary to keep the equipment operating.

Commissioner Evans: You referred to mainte-

nance and repairs. What are the repairs?

The Witness: That is really all one term.

Commissioner Evans: Two words to describe one term?

The Witness: That's right.

Commissioner Evans: All right.

A. (Continuing) We figure anything that keeps. the equipment down for one shift is minor repairs and maintenance. Anything that keeps the equipment out of operation for more than one shift we consider that as major repairs.

By the Commissioner:

RDQ. 28. Major repairs go into bear rentals? A. That's right; bear rentals.

RDQ. 29. Besides bear rentals and maintenance. charges, what else A, Operating charges, fuel, hibricants and grease—lubricating oil.

RDQ. 30. Fuel and lubricants? A. That's right.

RDQ. 31. Labor? A. Labor is not figured.

RDQ. 32. Labor is not included? A. No, sir.

Commissioner Evans: Go ahead.

## By Mr. Sweeney:

RDQ. 33. New, please turn to page three, the item "Lima Dragline". The same question, please. A. On the Lima dragline, we took the capital yakıation for a new two and a quarter Diesel machine

from the equipment rental schedule; that is, as in the first case of the tractor, new cost of the machine laid down in Salt Lake City.

Commissioner Evans: What time?

The Witness: 1940.

A. (Continuing) On that machine, we made quite a new modification; took out the original engine 165 horsepower engine and substituted a new Cummins Diesel, 250 horsepower engine. We took the capital value of that engine from our local dealer here in Denver. We added to that the cost of a three and a half cubic yard bucket. That left us a capital valuation for the remodeled 901 Lima dragline \$39,189. Now, to that capital valuation, we applied the ownership rate from the equipment rental schedule and got the bear equipment rental —that is, \$2,037.83 per month.

RDQ. 34. What was it you applied to obtain that two thousand dollar figure? A. Ownership rate in the equipment rental schedule.

RDQ. 35. What is the ownership rate? A. That is the percentage rate that is derived from the combination of depreciation, taxes, insurance, storage, minor repairs. In the maintenance of that machine we allowed a figure that we thought would be comparable to the D8 tractor. We figured that machine would be used probably a little harder than a D8 tractor and we gave them a figure of 36c per hour for maintenance. That totaled \$4.80 for sixteen hours.

Fuel and lubricants we did the same as on the caterpillar tractor, which is the result of experience

arrived at on other projects, on government force jobs.

## By the Commissioner:

RDQ. 36. On the basis of 250 horsepower Diesel engines? A. That's right; yes, sir. That brings the rental rate down to \$128.99 for the sixteen hours or an average of \$8.07 per hour.

By Mr. Sweeney:

RDQ. 37. Now refer, please, to page six, the item "Screening Plant" the same question. A. The screening plant is made up of a number of items of equipment—separation plant, we took the contractor's figures at \$20,000 as the valuation of the separation plant and making that plant, accommodating it for use on the job there was a charge for moving and erecting and remodeling which we included in this tabulation in capital valuation. Then there were three other—Waukeshaw Mctor, International Motor and a Palmer Generator. The total of the valuation of those separate items was \$33,821.85. That capital valuation we applied to our equipment rental schedule rate, the ownership

rate on this item was shown to be 6.7% of the capital valuation per month. That figured out \$19.80 per hour bare rental for the first shift \$66.03 and the second shift rental, which would be half of that, would be \$33.02; and the maintenance would be \$5.60; lubrication would be \$2.24. The sums of those for the two shifts would \$106.89, or an hourly average of \$6.68.

1684 RDQ. 38. Tell His Honor, please, about the rates shown for the screening plant used in computing the additional compensation for order for Changes Number Three. A. You mean the rental rate?

RDQ. 39. Yes. A. Yes, it was.

RDQ. 40. Please explain that. A. By that, you mean the final rate that was in the adjustment of compensation?

RDQ. 41. Yes, tell His Honor, please, the facts. A. Based on the information from the project and corrections that we made in this office here at Denver, we took out from the capital valuation I have just stated the factors, moving and erecting and remodeling; we considered that to be a direct charge to the job and not as having any part in the capital valuation. That was removed and that, of course, altered the final rental rate on the screening plant as set up in the adjustment for compensation.

RDQ. 42. Now tell His Honor, please, with respect to each of the other items listed in tabulation of data that was communicated to the Plaintiff.

Did you follow the same procedure in calculations? A. Yes, we followed the same procedure.

Mr. Sweeney: Take the witness.

1685 By Mr. Ruddiman:

RXQ. 43. Mr. Nixon, in computing these rental rates, did you apply the monthly rental rate for the full period that a piece of equipment was assigned to the work covered. Change Over Three? A. Used the time, the number of hours that were submitted by the Contractor. We took his hours as being correct because they jibed pretty closely with our time records on the job.

RXQ. 44. Those were hours of operation, were they not? A. I suppose they were, I don't know how they were arrived at; the figures were submitted by the Contractor.

RXQ. 45. Wouldn't it make a difference? A. How do you mean, it would make a difference? I don't understand.

RXQ. 45. Wouldn't it make a difference if the hours used in this claim were the hours of actual operation or the hours that the equipment was assigned to the work covered by Change Order Number Three? A. As I understand it, the times were the same. The hours you submitted was the hours the Contractor submitted, were the hours of operation consumed on the job, total hours.

RXQ. 46. Well, do you understand that the hours submitted covered sixteen hours a day for seven

days a week for the total time? A. That is my understanding.

RXQ. 47. That this equipment was on the operation, was on the work covered by Change Order

Number Three? A. That is my understand-1686 ing, yes.

RXQ. 48. It is true, is it not, when you applied the monthly rate to a piece of equipment no deduction was made for time lost due to Sundays or Holidays or other idle time? A. That is correct.

RXQ 49. That is correct, you say? A. That is correct, yes, sir.

RXQ. 50. I believe you said that, in connection with the screening plant, you used an ownership rate of 6.7% per month. Is that correct? A. I believe that is correct; I don't remember the figures in that tabulation but I believe that is correct. That is on the screening plant.

RXQ. 51. And what length of life on the pieces of equipment does that rate contemplate? A. It contemplates a life of six years.

RXQ. 52. Do you know what the life of the screening plant in issue was? A. I don't know what the actual life of it was, no, because, as I understand it, the machine was shipped off the job after completion of the dam. I don't know what the condition of it was.

RXQ. 53. You said, did you not, you computed the rates that were used in the adjustment under Change Order Number Three? A. Yes, sir; that is right.

RXQ. 54. And computed the amounts allowed?

A. That is correct.

also that you don't know whether the hours, total hours, used represents the hours that the equipment was actually operated or hours that it was assigned to the work in borrow pit number two? A. I don't know who figured those hours. They came from the project. As I understand it, they were submitted by the Contractor.

RXQ. 56. It didn't make any difference to you?

A. We assumed they were correct, of course.

RXQ:57. Which did you think they were, hours of operation or hours that the equipment was assigned to work on borrow pit number two? A. We took it that the hours submitted were the hours assigned to that job, that particular operation.

RXQ. 58. Whether it was working or not? A. That is right.

RXQ. 59. I believe you testified that you used a figure of 30c for maintenance on the Lima dragline; that is 30c per hour; and I believe you also testified that you felt that that maintenance on the Lima dragline was comparable to a maintenance on a D8 tractor; is that correct? A. I thought it would be a little higher than on a D8 tractor.

RXQ. 60. You thought it would be a little higher?

A. Yes, sir.

RXQ. 61. The difference in the value or the size of the equipment would make no difference

ation and the size of the equipment doesn't necessarily have anything to do with the maintenance work. It is the class of work that the equipment is working on, operating conditions would determine that.

RXQ. 62. And where did you get the figures that you used for maintenance on the Lima dragline? A. Just on the Lima?

RXQ. 63. That's right. A. Well, as I testified before, that those maintenance figures we got from a composite figure, you might say, taken from various sources, from other jobs that are operated in similar conditions, using similar equipment.

RXQ, 64. Do I understand that you made a study of operations in connection with your Bureau work and also that of other government agencies? A. That's right.

RXQ. 65. And what did you do, did you average those? A. Well, no, I wouldn't say we averaged them; we tried to, you might say. It was an average, not an average of all of them, an average of similar jobs, similar where conditions were similar.

RXQ. 66. Do you know what the figure is that the Highway Department had on the Lima? A. I don't remember, no.

RXQ. 67. Do you have that information available? A. I think perhaps we have; probably figure it up. All these figures are on hand.

1689 Commissioner Evans: What are these figures pertaining to?

Mr. Ruddiman: These are figures for maintenance of various pieces of equipment.

#### By Mr. Ruddiman:

RXQ. 68. Well, just how did you arrive at the 30c figure used on the Lima dragline? Do I understand that you looked at the figure of the Highway Department, certification of your own, certification of the Bureau of Public Roads? A. That is the way we arrived at them, yes. We considered the jobs that these pieces of equipment were operating on, tried to arrive at a comparable rate that would apply to conditions similar to what the Contractor was operating at, such as altitude, type of excavation, such as that.

RXQ. 69. And do you have the data which you studied in arriving at your rate of 30c on the Lima dragline? A. I wouldn't say definitely that we have it but I expect it is over in the office.

RXQ. 70. Will you furnish it to the Court? A. If I can find it I will, yes, sir; I wouldn't guarantee that we have it because all that stuff is six or seven years old, lots of it; the data is probably misplaced or lost, but I can try to find it.

RXQ.71. Suppose that a Lima dragline works—strike that. Suppose that a Lima dragline is assigned to extra work and works for a period-of thirty days and that during that time it works six-

teen hours a day, seven days a week. Will 1690 the daily rate, multiplied by thirty, equal the monthly rate as used in the Bureau's schedule? A. Yes, it should.

RXQ. 72. Well, suppose a piece of equipment, a Lima dragline, is assigned to extra work, for a period of thirty days and that, during that time, it works sixteen hours a day for six days a week and looses five days due to bad weather and breakdowns. How would you compute the hourly rate on such a case? A. Are you figuring that for just a week? I have to ask you a question. What is the total period you are figuring that?

RXQ. 73. Thirty days.

(The question was read.)

RXQ. 74. Might I add one other factor. That it looses—there are four Sundays in a month and it looses four Sundays out of the month in addition to other days which I mentioned. A. Be paid the standard monthly rate because that allows no deductions for Sundays or holidays.

Commissioner Evans: Do I understand in that case you would apply the standard month rate rather than the hourly rate?

O. The Witness: That is right.

#### By Mr. Ruddiman:

RXQ. 75. That is the basis upon which the A.G.C. rate should be applied, monthly rate? A. Yes, sir.

Mr. Ruddiman: That is all. Off the record, please?

Commissioner Evans: Off the record.

1691 (Whereupon there was unrecorded discussion.)

Commissioner Evans: On the record.

RXQ. 76. By Mr. Ruddiman: Do I understand that in the Bureau's schedule of equipment rental rates, you use the same elements and the same percentages for ownership expense as are used in the A.G.C. schedule of equipment ownership expense? A. Yes, that is correct.

RXQ. 77. It is true, is it not, that those rates should be applied in the manner set out in the A.G.C. schedule of equipment ownership expense? A. That is true, in so far as the A.G.C. equipment ownership expense schedule specifies. They don't go into very great detail on instructions in how to apply these rates.

RXQ. 78. It is true, is it not, that the A.G.C. schedule of equipment ownership expense states that the monthly rate is not subject to deductions for Sundays or Holidays and should be charged for the full calendar period elapsing between shipments to and from the job? A. Yes, it states that.

RXQ. 79. And it is true, is it not, that the monthly rate used by the Bureau should be applied in the same fashion in orders for extra work? A. That's right.

RXQ. 80. The same is—the statement submitted by the Contractor in connection with Change Order Number Three. Withdraw that question.

It is true, is it not, that the hourly rates for

maintenance used by the Bureau in connec-1692 tion with the claim under Change Order

Number Three, are not based upon the actual experience on this job? A. Well, in some cases, these rates—no, I wouldn't say they are based exactly—You mean we didn't take your maintenance rates?

RXQ. 81. They are not based on any cost figures on the Vallecito job? A. Maintenance, you mean?

RXQ. 82. That's right. A. No, I don't believe they are.

Mr. Ruddiman: That's all.

Mr. Sweeney: That's all.

Commissioner Evans: We will note a recess.

(Whereupon a short recess was taken.)

Commissioner Evans: The hearing will be in order.

Mr. Sweene Mr. Trenam, will you take 1693 the stand, please.

Milton E. Trenam, returned to the witness stand, having been previously sworn, and testified as follows:

Direct Examination on Claim No. 17

#### By Mr. Sweeney:

Q. 41. We show you, please, Exhibit 17-X, pages one to seven inclusive. Refer, please, to page four and particularly the red figures thereon and tell His Honor, did you make them and if so explain them. A. Yes, I made these figures. The figures in

red are substituted for those in black. After the final estimate was prepared and checked and they show the exact quantities of material that were excavated during the various periods shown here. They are the figures that were used in the final estimate for payment to the Contractor for excavation.

Mr. Sweeney: Take the witness.

Mr. Ruddiman: No cross.

Mr. Sweeney: I believe the document was offered subject to that explanation.

Commissioner Evans: That is right.

1694 Jean R. Walton, Peturned to the witness stand, having been previously sworn, and testified as follows:

Redirect Examination on Claim No. 17 By Mr. Sweeney:

RDQ. 1158. I show you a document marked Defendant's Exhibit 17-Z. Tell his Honor what it is.

(The document above referred to, marked Defendant's Exhibit No. 17-Z for identification, is filed in connection with this case.)

A. This exhibit is a tabulation of equipment hours prepared by me showing the hours that the various items of equipment operated during January, February and March, 1940.

RDQ. 1159. And what is its purpose, please, with respect to this claim? A. It is to illustrate some of the testimony that I will give.

Commissioner Evans: From what were the figures taken?

The Witness: The figures were taken from a load count furnished the government by the Contractor during these periods of operation and from inspectors' reports.

Mr. Ruddiman: Can you tell me what operations are involved in this exhibit?

The Witness: I can. Hauling riprap from the rock quarry to the embankment.

Mr. Ruddiman: I object to the introduction of this exhibit as having nothing to do with the claims

which cover excavations of borrow pit number two.

RDQ. 1160. Will you explain that to His Honor? A. This exhibit does have something to do with this claim because the Contractor has computed rates on hours of operation, total hours of operation for a year and he shows no hours of operation for these periods there. In other) words, he shows that the equipment was operating only from April through November and this equipment was operating during January, February and March.

Commissioner Evans: Objection overruled. The document is received.

(The document above referred to, previously marked Defendant's Exhibit No. 17-Z for identification, is now received in evidence and filed in connection with this case.)

By Mr. Sweeney:

RDQ. 1161. I show you Defendant's Exhibit 17-AA. Tell His Honor what it is.

(The document above referred to, marked Defendant's Exhibit No. 17-AA for identification, is filed in connection with this case.)

A. This is a tabulation prepared by me which shows in detail the breakdown of the total hourly equipment rental rates as used by the Bureau of Reclamation in computing the adjustment of compensation under Order for Changes Number Three. It also shows the breakdown as shown by the Plaintiff in his Exhibit 17-E and also a breakdown of similar pieces of equipment as reflected in cost data from the Panama Canal Commission. It will be used in explaining some of my testimony.

1696 Mr. Sweeney: It is now offered to be used to illustrate the testimony given by the witness.

Mr. Ruddiman: I object to this exhibit, Your Honor. It purports to show certain costs on the Panama Canal job and that has nothing whatsoever to do with this claim.

Mr. Sweeney: It may be noted, if Your Honor please, this data was taken from an exhibit already in evidence:

Commissioner Evans: The objection is overruled. It will be received.

Mr. Ruddiman: Exception.

(The document above referred to, previously marked Defendant's Exhibit No. 17-AA for Identification, is now received in evidence and filed in connection with this case.)

RDQ. 1162. (By Mr. Sweeney) I show you a document marked Defendant's Exhibit 17-BB for Identification. Tell His Honor what it is.

(The document above referred to, marked Defendant's Exhibit No. 17-BB for Identification, is filed in connection with this case.)

A. This exhibit is data prepared by me which shows a percentage of the capital valuation of each piece of equipment as reflected by maintenance charges in the Contractor's or the Plaintiff's Exhibit 17, E. It also lists the percentage of capital valuation as allowed by the A.G.C. for major repairs which has been included in the Plaintiff's ownership expense hourly rate and then shows a total that is charged for maintenance and major

repairs on a basis of percentage of capital valuation for the year's operation. It will be illustrated in my testimony.

Mr. Sweeney: It is now offered, Your Honor.

Recross Examination on CLAIM No. 17

#### By Mr. Ruddiman:

RXQ. 1163. In the column "Maintenance April to November, 1940" where are the figures taken from? A. They are taken from Plaintiff's Exhibit 17-D.

RXQ. 1164. And the next column? A. Just a minute. Column "Maintenance April to November 1940" is taken from Plaintiff's Exhibit 17-D.

RXQ. 1165. The next column? Headed "Maintenance Percent Per Year"? How do you arrive at the figures in that column? A. By dividing the amount of capitalization into the amount charged for maintenance.

RXQ. 1166. And the next column, "Major Repair Percentages Per Year." Where do you get the percentages in that column? A. That is taken from the A.G.C. schedule and is included in the amount that the contractor has included in its ownership. That is included in Plaintiff's Exhibit 17-E, under "Total Rental for Year."

RXQ. 1167. How do you know whether major repairs are included? A. I know what the A.G.C. Manual says; I know the rate that the Contractor is paid or has applied here which are the rates in the A.G.C. Manual.

RXQ. 1168. Have you made any examination of Plaintiff's figures on the cost of repairs and maintenance? A. I made an examination of

Plaintiff's Exhibit 17-E and 17-D and these are reflected in those exhibits. In other words, if you take the percent set up here, the approximate percent of capital value per year, this is applied per month, there is included in that this percentage that is for major repairs.

RXQ. 1169. Then the percentages appearing in the column "Major Repairs," are percentages taken from the A.G.C. schedule. Is that correct? A. Correct. And the total, last column, is a total—

in other words, it is a summation of the major repair percentages plus the maintenance percentages. I will explain this in my testimony.

Mr. Ruddiman: No objection.

Commissioner Evans: So received.

(The document above referred to, previously marked Defendant's Exhibit No. 17-BB for Identification, is now received in evidence and is filed in connection with this case.)

# \* Redirect Examination on CLAIM No. 17

## By Mr. Sweeney:

RDQ. 1170. Mr. Walton, please, I wish to ask you certain preliminary questions before we touch the exhibits that have just been offered.

Now, in regard to Order for Changes Number Three, explain that to his Honor. A. Order 1699 for Changes Number Three is a Form B

order directing the Contractor to do the work in borrow pit number two that was issued because an agreement could not be reached between the Contractor and the Contracting Officer. Order for Changes Number Three directed the Contractor to perform the work and also states that any claim for adjustment in the amount due under the contract by reason of the changes shall be stated and filed with the Contracting Officer within ninety days from the date of the order. It does not state anything about cost-plus ten percent, as the Contractor's statement of claim is submitted.

RDQ. 1171. Now, with respect, please, to Contractor's statement of claim, tell His Honor, please, were changes made in that from time to time? A. The initial statement of claim received from the Contractor was delivered to the project office amounted to \$334,994.42. This was revised upward approximately \$30,000 by the detailed statement dated April 8, 1941. This was again revised upwards \$23,000 by the statement dated June 23, 1942 and in the exhibits placed in evidence by the Plaintiff in the hearings an entirely different statement of claim was introduced in which the rental rates were entirely different. This revised the figure upwards about, approximately, \$60,000 over and above the amount as stated in the final release from contract.

RDQ. 1172. Do you mean by that that Plaintiff has, in presenting proofs in court, resorted to dif-

ferent methods of calculation of the claim 1700 than in submitting it to the Contracting Officer? A. That is right.

RDQ. 1173. Now please, in respect to this matter of maintenance rates, explain that fully to His Honor. A. The maintenance rates as allowed by the Bureau of Reclamation was furnished the project by the Denver office, as explained by Mr. Nixon. The maintenance, as shown by the Contractor, is reflected in its exhibit, Plaintiff's Exhibit 17-D. Maintenance, as is the general practice on most construction jobs, applies only to minor repairs,

repairs that require a piece of equipment to be out of operation not over one shift. Does that sufficiently cover your question?

RDQ. 1174. I just wanted you to explain to His Honor what is meant and what it includes. A. Maintenance and minor repairs are identical.

RDQ. 1175. Now please, with respect to the equipment that is involved in the computations of data that you have prepared for the Court on the basis of which you make a comparison between the Bureau's rates, Plaintiff's rates and actual costs. First, please, did you see the various items of equipment, as it was brought to the job, involved in this claim? A. I did. I was on the job when all the equipment arrived.

RDQ. 1176. Tell His Honor please, what was the condition of the equipment when it came on the job? A. The first equipment on the job was brought off a job that the Contractor was completing on

Wolf Creek Pass, consisting of Caterpillar 1701 tractors and carryall scrapers. The tractors

that first arrived on the job, most of them were in very poor condition and were given major repairs before they did very much work on the job.

The Lima dragline, I think, and also the Lorain shovel came from the Wolf Creek Job during the later part of—or the summer of 1938. These were in only fair condition. They apparently had not been put in first class condition before they arrived on the job.

RDQ. 1177. Now, with respect generally to the condition of all the equipment that is involved in this particular claim? A. Practically every item of equipment that came to the job with the exception of possibly the Euclid trucks and I don't think all of them were new when they arrived there. There was equipment that had been used for a considerable period of time.

There is one other item of equipment besides the Euclid trucks—one sheepsfoot roller. Some of the sheepsfoot rollers, when they arrived on the job were just a little bit above the junk heap and were completely overhauled and practically rebuilt by the Contractor on the job. Some of the other equipment was old and practically worn out when it arrived there.

However, these Euclid trucks, part of them were new and most of them were practically new and in good condition.

The screening plant was new when it ar-1702 rived on the job.

RDQ. 1178. Now, with respect please to what is called minor repairs, will you describe that in some detail to us? A. As I have just explained, minor repairs, I would say, are the same as maintenance and covers repairs that are made to a piece of equipment intailing its being off the job for only a short period. It is usually standard practice to consider anything that requires a piece of equipment to be down for not over a shift to be classed

as minor repairs or maintenance and anything that requires it to be down longer than this to go in major repairs.

RDQ. 1179. Now, the same question; what are major repairs? A. Well, I would say major repairs are where a piece of equipment is required to be out of operation as much as a shift or more.

RDQ. 1180. Now, when the job was finished and the equipment was moved off, what was its condition at the time it was taken off the job and it was completed? A. Following the shutting down of most of the work on about November 6th, 1940, the Contractor was immediately getting this equipment ready, or the major portion of it ready, to ship out to another job which, I was told by Mr. Stewart and the Contractor's general foreman, was going to this job in Panama. I saw the equipment as it left the job. I can't say where it went to.

RDQ. 1181. Now, what was the condition when it left the job? A. The equipment that was taken out of there, presumably to go to Panama, had been

overhauled and was in good condition.

1703 RDQ. 1182. Now, with respect, please, to the cost of these minor and major repairs that you have told His Honor about, are they reflected in the costs of the Plaintiff? In other words, are they charged to this job? A. You say minor repairs?

RDQ. 1183. Everything, minor and major repairs, is it all charged to this job? A. All repairs—

I haven't examined the Plaintiff's books; I couldn't say what comprises it but there is an item for maintenance and another item for major repairs so I presume all repairs made to this equipment are in this cost.

Mr. Ruddiman: I object to his testifying as to assumptions. Let him testify as to facts.

Commissioner Evans: It has to do with the figures. Objection overruled.

Mr. Ruddiman: Exception.

#### By Mr. Sweeney:

RDQ. 1184. With respect to accessories that were used or to be used in connection with the repairing or rebuilding any of this equipment involved in this claim, tell His Honor, were such accessories brought to the job and charged to this job? A. I don't know exactly what you mean by accessories.

RDQ. 1185. Repair parts. A. You mean changes made?

RDQ. 1186. Yes. A. The changes made to the Lima dragline has been explained by Mr. Nixon, which was taken care of by increases in capi-

1704 tal valuation of the dragline. It is the prac-

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tice of lots of contractors—I can't say it was here—that when repair parts are received on the job, they are charged directly to the items of equipment for which they are purchased irrespective of when they go on the equipment or into stock.

Mr. Ruddiman: I move to strike that testimony as to what other contractors do. It has no bearing on what was done here.

Commissioner Evans: Motion denied on the ground that the testimony given by the witness has to do with the value to be ascribed to his testimony as to his own computations.

Mr. Ruddiman: Exception.

### . By Mr. Sweeney;

RDQ. 1187. Now please, when the equipment was moved off the job, with respect thereto, were there any spare parts remaining and were they moved or not? A. I can't say how many. I saw some of the trucks leaving the job loaded with spare parts. I would say, by casual observation of the Contractor's stockroom at the later part of the job, there was a considerable quantity of spare parts that was moved off the job.

RDQ. 1188. Now please, will you refer to the tabulated data that you have prepared to illustrate to the Court your testimony touching the comparative rental rates as computed by both parties and also the actual costs? Now just explain in detail to His Honor. A. First, I would like to go into this A.G.C. schedule slightly and that is the basis from

which the Bureau Equipment Rental Sched-1705 ule, Plaintiff's Exhibit 17-C, is made. The

A.G.C. Schedule, which is Plaintiff's Exhibit 17-B, sets up under each item of equipment what is called an "Expense Per Working Month," based on the percentage of the capital valuation of the equipment. Items which go into make up this expense per working month, which I will refer to as "Ownership Expense," is composed of an item for depreciation and an item for—these are all set up in percentages—overhauling, major repairs and painting; item four, interest; taxes, storage and insurance, which gives a total percentage of ownership expense. This total ownership expense for the year is divided by the average number of months that this piece of equipment would be expected to work during a year. This is based on average conditions. This gives us the expense per working month on a percent factor.

This percent factor that the Contractor has used in his computations, shown on Plaintiff's Exhibit 17-E under the heading "Approximate Percent of Capital Value Per Month," it will be noted, includes in each instance a percent for major repairs of the equipment, overhauling and maintenance.

This Bureau of Reclamation Equipment Schedule, for instance, any piece of equipment, there is a column in there headed "A.G.C. Data." Under this, for each piece of equipment—this is also Plaintiff's Exhibit 17-C—is shown taken from the

A.G.C. Manual the economic life years of the equipment, the annual use in months, and

the "Average Use Per Month" or the "Expense Per Working Month" in the A.G.C. Manual. Now

this forms the basis for the computation for what is shown as "Actual Rental Rates" set up in the Bureau Equipment Rental Schedule as a monthly rate, extra shift rate, and an hourly rate. This hourly rate is to be used where equipment is used for small lengths of time—small durations, not to exceed one hundred per month. The shift rate is to be used where the work—where the equipment is working one shift per day, not to exceed thirty per month. Extra shift is to be used where the equipment is working two shifts or three shifts and is to be applied for the extra shift per month.

In other words, if a piece of equipment is working two shifts per month, say, you take the sum of what is shown as the shift rate and then plus what is shown as extra shift rate and that gives the total for the two shifts in operation. This is based on the A.G.C.

The specifications, under paragraph ten, "Extras," states, "In extra work orders and change orders that costs snall include all expenditures for material, labor (including compensation insurance) and supplies furnished by the contractor or/and a reasonable allowance for the use of his plant and equipment where required, to be agreed upon in writing before the work is begun; but in no case will include allowance for office expense, general superintendents and other general expenses." It will be noted that this states "A reasonable allowance." No reference is made to the A.G.C. Schedule.

plained by Mr. Nixon, of the Bureau of Reclamation rental rates includes an ownership expense hourly rate which is based on—taken from Plaintiff's Exhibit 17-C—a two-shift operation plus a maintenance allowance for maintenance per hour plus allowance for fuel and lubrication costs per hour and these are added to give the total rental rate as computed by the Bureau of Reclamation.

In making these computations, in order to be fair, the capital valuation of new equipment is, in all cases, used. This is set up as brand new equipment rate that would be charged for brand new equipment. In this particular instance here, practically none of the equipment—in fact none but the two 18-yard Euclid trucks—were new at the time this work was involved.

The rates so determined were used in computing the Contracting Officer's proposed allowance for additional compensation for order for Changes Number Three, which, it was felt, gave an equitable additional compensation to the Contractor for performance of this work which amounts to a little—around \$45,000.

The rental rates used by the Bureau of Reclamation were submitted to the Contractor as was explained by Mr. Nixon in his testimony. This was at the request of Mr. Wunderlich in his letter of June 25, 1941.

1708 The capital valuation as shown in the Bu-

reau of Reclamation computation and as has been previously touched upon was for new equipment delivered to Salt Lake City, Utah, which is a comparable price to any area to which the Bureau of Reclamation work was in progress and was comparable to what it would have been at this job.

The Contractor introduced into evidence at previous hearings his exhibit, Plaintiff's Exhibit 17-E, 17-D and 17-F, which show the first complete breakdown of how the Contractor's equipment rental rates were arrived at. As that had been received by the government previously it had just been a rate based on hours. There was no breakdown on how the figure had been arrived at. Therefore, in preparing my computation of Exhibit 17-AA and also Exhibit 17-BB, I based it on data contained in Plaintiff's Exhibit 17-E, 17-D, and 17-F.

The Contractor's Exhibit 17-F has been computed by taking the capital valuation as shown on the Bureau of Reclamation schedule, not the actual cost to the Contractor of equipment, and applying the percent factor for monthly expense as shown in the A.G.C. Schedule, on the basis of months of operation. The Contractor has then taken the months of operation for one shift, based mostly on eight months and for the second shift, in most cases, of six months and by applying this percentage factor for eight months, which is in accordance with what is shown here in A.G.C., and has arrived

at a total rental for the year. This total 1709 rental established for the year is what I show. From this total rental for the year the Contractor has divided this by the total so-called hours worked during 1940 to arrive at an hourly rate. In my exhibit 17-AA, I have this as headed "Ownership Expense Hourly Rate." The Contractor, for the period of hours worked in 1940, has failed completely to include the hours of operation during the months of January, February and March, which are part of the year 1940 and should be included in arriving at the hourly rate, if we are arriving at that by the total number of hours of operation divided into the total rent for the year.

These hours of operation during the months of January, February and March, for each of these stems of equipment, is shown on Defendant's Exhibit 17-Z and would materially reduce the hourly rate shown for several items of equipment, especially the trucks and the Caterpillar D8 tractors. These hours of operation were taken from inspectors' reports and I think can be substantiated from the Contractor's own records.

This equipment was hauling riprap during this period of January, February and March from the rock borrow pit seven miles upstream from the dam to the dam. This would, as I have previously stated, substantially reduce this hourly rate as computed by the Contractor.

The fuel and lubricant rate, as shown on the

Contractor's Exhibit 17-E, is the same as shown on the Bureau of Reclamation's computation and is not a matter of dispute.

tractor's schedule are, well, some ten to twenty times what is shown on the Bureau of Reclamation schedule and are considered by the Reclamation engineers as excessive. We have no way of knowing what goes in to make these mainterance rates up but, based on the amount of this rate, it is my opinion that they include all repairs made, not only maintenance by overhaul, general repairs and all repairs that were made during the period and all parts used during the period.

Mr. Ruddiman: I object to what his opinion is.

Mr. Sweeney: The witness is certainly an expert and I believe he has a right to explain what these comparative figures show.

Commissioner Evans: Objection overruled. Go ahead.

A. (Continuing) By adding in, as the Contractor has, to his hourly rate, the so-called maintenance rate and the Bureau of Reclamation fuel and lube rate, which is not a point of controversy, the Contractor arrives at a total hourly rate used in the computation to arrive at the total amount of his claim shown in Plaintiff's Exhibit 17-F, of some \$422,000 which, of course—from which, of course is deducted the amount that is actually paid which amounts to about \$194,000. This has actually been paid.

Commissioner Evans: Do you understand the Contractor has used the term "maintenance" to mean the same as you take it to mean?

The Witness: I don't know what it in1711 cludes but I am of the opinion that it includes major repairs, overhaul, all work
that was done in repairing that equipment and all
parts that went into it.

Commissioner Evans: Does the Contractor have additional figures for major repairs?

The Witness: Yes, I have an exhibit here showing that.

Commissioner Evans: Goahead.

A. (Continuing) On my exhibit, or on the Plaintiff's Exhibit 17-BB—Defendant's Exhibit 17-BB I have listed each item of equipment that is involved in this item of claim and set up under the first column, or second column, the capital value of the equipment as used by the Bureau of Reclamation and also as used by the Contractor although most of this equipment was old equipment at the time it was put in use. This is the capital value of brand new equipment. In the second column I show the maintenance from April to November, 1940the so-called maintenance from April to November, 1940, as reflected by Plaintiff's Exhibit 17-D. In the fourth column is the percent factor which would be the percent of capital valuation that the Contractor is asking for maintenance. Mind you, this is for minor repairs for the year. In the fifth

column I have set up the major repair that is the percentage of the capital valuation as allowed by the A.G.C. for major repairs which is also included in the Contractor's hourly rate as shown on Plaintiff's Exhibit 17-E. In the final column I show the sum of the percent of capital valuation for major repairs as used by the Contractor and the percent

used for maintenance giving a total percent 1712 for all repairs for the year in a percentage

of capital valuation of the piece of equipment, that is, if it was new equipment.

Commissioner Evans: Is it possible to obtain from the A.G.C. RATES a comparable figure of total percentages for maintenance and major repairs?

The Witness: No, sir. The A.G.C. sets up a percentage for maintenance or repairs only and doesn't set up anything for maintenance.

What I am trying to develop here is that in some cases here, for instance, we'll take the D8 tractors. The A.G.C. allows a contractor, and this is based on experience over numerous contractors, fifteen percent of the capital valuation of a D8 tractor for major repairs for a period of a year. The contractor, in addition to allowing this fifteen percent for major repairs, has added on fifty-nine and seven tenths percent of capital valuation for so-called maintenance or minor repairs. Undoubtedly the major repairs would have amounted to far more than minor repairs or maintenance.

This is also true on down the line with practically all items of equipment with the possible exception of Euclid-20-yard, bottom dump trac-trucks. The figure shown there for maintenance for a year is 5.9%. Surely a 20-yard Euclid, which is a much heavier, larger piece of equipment, the maintenance would be higher than it would be for a 12-

yard Euclid which is a smaller piece of 1713 equipment.

It will be noted in the case of the sheepsfoot roller that the Contractor has charged for
maintenance, April to November, 1940, \$5,471
against a total capital valuation of \$3,168. In other
words, it would have been cheaper to have gone out
and bought a new roller.

It will also be noted that in the case of the RD8 tractors, the capital valuation of these tractors \$71,145. The Contractor charges for maintenance, April to November, 1940, a figure of \$42,533.00 for maintenance allowance; it doesn't include major repairs which is 59.7% of capital valuation of the equipment.

In Defendant's Exhibit 17-AA I have listed all items of equipment that are involved in this claim and a few that are not involved in this claim but are involved in some of the other claims, and give a complete breakdown of the Bureau of Reclamation rental rates as used in computing the additional allowances proposed to the Contractor under order for Changes Number Three, as against this

I have listed here the same features or breakdown of the total hourly rate as computed by the Contractor and also the same as reflected in the Panama Canal cost report on the contract performed by the same contractor on that job, as a comparison.

It will be noted that the figures used in here are taken from the Panama Canal cost report and are those shown in the report less the cost of operating, labor; that is, the cost of the shovel operator, dragline operator which, in no case, is an inclusion in

1714

the Bureau of Reclamation or Contractor's

It will be noted in this comparison that in each case the maintenance, at the hourly rate, allowed by the government for these various items of equipment that are similar or identical items of equipment, are in all cases higher than the amount that is allowed or the amount of the actual costs for minor repairs which is the same thing, on this Panama job.

The Panama job, the Plaintiff will say, is not a comparable operation; equipment operation will vary from job to job but it would be somewhat comparable to the work on the Vallecito Dam. It is at a high altitude and we had considerable rain through the summer. The work in the tropics—of which I spent some time in the tropics—is also a good deal of it performed in rain and mud conditions, and I think the minor repairs from job to job would not vary a great deal.

\*The major repairs would vary a great deal, depending on whether the equipment was new or was old, worn out equipment.

It will be noted on this comparison here that on the Bureau of Reclamation basis all equipment is on a two-shift basis with the exception of the items that are indicated, which are: Lorain dragline, International truck, the Kohler light plant, and the Euclid utility tractor; these were based on a oneshift basis.

It can be readily seen that the Contractor's maintenance rates are far in excess of what was determined by the government engineers to be equitable maintenance hourly rates and also what were the actual minor repair rates on this Panama

1715 job.

Now the costs reports on this Panama job, or the equipment—the tractors or the shovels and draglines, were lumped together as equipment and there were five of them-used as is reflected by this report. That accounts for the rates shown under Lima dragline and Lima shovel, under Panama Canal, as being identical. The others, I think (the tractors and Euclids)-in fact, I think some of these are similar or possibly identical pieces of equipment.

Commissioner Evans: We will take a short recess.

(Whereupon, a short recess was taken.)

Commissioner Evans: The hearing will be order.

Jean R. Walton, resumed the stand and testified further as follows:

Redirect.Examination (Cont'd.)

By Mr. Sweeney:

A. The Contractor's first detailed statement of claim, as I remember, was dated April 5th, 1941, gave a detailed breakdown on labor and equipment, and this was used by the Contracting Officer in computing or as a basis for computing the adjustment of compensation that was considered equitable.

By Commissioner Evans:

RDQ. 1189. Is that estimate in evidence? A. I don't believe it is.

Mr. Ruddiman: I think it was introduced at the first hearing in this case.

By Commissioner Evans:

RDQ. 1190. Can you give us a reference 1716. to it? A. I believe so.

Commissioner Evans: If not we'll put it in evidence right after lunch. I thought it was already in.

Mr. Sweeney: It appears there are two letters of the same date:

Mr. Ruddiman: If the Court please, it would be a part of Plaintiff's Exhibit 17 which includes considerable correspondence.

The Witness: I don't believe it is in the findings of fact; the amount is in there but the detail is not.

Commissioner Evans: You have a copy which will be supplied?

The Witness: We'll put it in evidence.

Commissioner Evans: Very well. Proceed.

The Witness: (Continuing) Today.

The Contractor submitted a summary along with all the details of the hours of labor, materials, and the hours of equipment use, for which claim for additional compensation was being made.

By Commissioner Evans:

RDQ. 1191. On claim 17? A. On claim 17. The order for Changes Number Three did not state that payment would be made on cost-plus-ten-percent and also did not state that any equitable adjustment would be computed in total operations in borrow pit number two, including excavating, hauling, removal of plus-five-inch stones. That is the reason

that that report of mine that was introduced as Defendant's Exhibit 17-E and also De-

fendant's Exhibit 17-F-1, which was completed previous to this time was based strictly on the work involved in removal of plus-five-inch stones from the material; but the Contractor submitted his statement of claim in detail covering the entire operations in borrow pit number two and after the Contracting Officer had studied the Contractor's submission of claim and comparison had been made, it was found that the hours of labor was substantially correct, the materials used was substantially correct and that the hours of operation

of equipment in performing work in borrow pit number two was substantially correct with a few corrections. Therefore, because of the fact that the Contractor had so submitted its claim, the Contracting officer found that by the application of what was considered a fair rental allowance instead of the rental allowance as used by the Contractor, that an equitable adjustment was reached. The Contractor showed, in its statement of claim, actual hours of operation for the various items of equipment in performing the total work in borrow pit number two. These substantially agreed with government records. Therefore, the only way that this could be used as a basis in calculating the additional compensation was on the hours of operation of the equipment and that is the reason that

the government engineers used an hourly 1718 basis.

The equipment, with the exception of two or three small items which I have previously called attention to, all worked on a two-shift basis. The equipment did not work entirely on work that is involved in this claim, with the possible exception of the screening plant; other items of equipment would work maybe for half a day over in borrow. pit number two and then maybe they were moved on the other side of the river and worked in borrow pit number one. Maybe the trucks would haul from borrow pit two part of the time and part from borrow pit number one. It was absolutely impossible

to break this down except on an hourly basis—that is, hours of operation in borrow pit number two.

The rental rates could not be applied on a monthly rate because part of the month the equipment was working in work involved in this claim and part of the time working in an entirely different portion of the work on the job.

RDQ. 1192. Was any allowance made in your hourly allowance for idle time? A. The rates were computed on an hourly rate and then these hourly rates were applied to the actual hours of operation.

RDQ. 1193. But no allowance was made as against this work for time that the equipment might have been idle, is that correct? A. That is correct.

Commissioner Evans: Go ahead.

A. (Continuing) The equipment that was used over here in borrow pit number two, for the 1719 most part would operate, possibly, a shift in that borrow pit then would move somewhere else for a shift. That is, a lot of trucks did that and

some of the excavating equipment did that.

The screening plant was brought on the job in 1938 for use in separating materials that were set up in the specifications under items that required separation. This consisted of excavations from the outlet works, the spillway, the diversion channel and the cut-off trenches.

The plant was bought new, brought onto the job in 1938 and set up at the downstream side of the dam and was used for separating all of the various items of work that were so set up, with the exception of the 50,000 yards set up to be separated from cobble borrow pit.

At the close of the 1939 construction season, all of this work had been completed—all this required structural excavation. The screening plant had accomplished all the work with the exception of the 50,000 yards set up in the specifications for which it was purchased and brought onto the job. It was then at the Contractor's own decision that they elected to set it up in borrow pit number two and used it to remove the plus-five-inch stones from the material excavated from borrow pit number two.

The Contractor, in arriving at his rental rates has used as a basis for depreciation of the screening plant a three-year life and has used as a comparable

piece of equipment a sheepsfoot roller in 720 which the A.G.C. Schedule sets up a three-

year life. There is absolutely no comparison between the operations of a sheepsfoot roller and a separating plant.

The government engineers have used, for depreciation, a six-year life which is taken from a comparable piece of equipment—a heavy duty crusher—and the rate as shown for a heavy duty crusher (which is based on a six-year life) and six months average operation per year) setting up an expense per working menth of 6.7% was used.

RDQ. 1194. Does not the A.G.C. Schedule include a separation plant? A. There is no separation

plant listed in there. The most comparable piece of equipment in there is under "Pit and Quarry Plants, Portable" and are crushing, screening and loading equipment and this piece of equipment to which I refer is listed under "Pit and Quarry Plants—Crushing, Screening and Loading—Heavy Duty, Single Crusher, Large Capacity," which is more of a comparable piece of equipment.

Now the Contractor has brought out in Plaintiff's testimony that although this plant was used for 1938, 1939 and 1940, that at the end of 1940, for all practical purposes, it was junked. The operation at the plant at the close of 1940 season was far more successful and was, I would say, a much better plant than at any time that it was in operation

on the job. I don't think there is any ques-1721 tion but if the plant was moved to another job it could have been used for another three years with a small amount of repair work.

The Contractor has also included in their cost of the separating plant the repairs that were made to it before it was put in operation for 1940 which, I think, are chargeable to the work done in 1938 and 1939. In other words, if we are setting up a plant at \$20,000 as a new plant, it should be in condition—at least in comparable condition—as it was when it arrived on the job. This figure of \$20,000 that the government has used as capital valuation of the separating plant, is not a figure as testified by the Plaintiff's witnesses a figure that was set up by

the Bureau of Reclamation; it is a figure that was given me by Mr. Wunderlich when the plant first arrived on the job. Mr. Wunderlich told me the plant cost \$20,000. We didn't question it and that is the figure we set up and used for capital valuation. I learned since it did not cost, or at least the Contractor did not pay \$20,000 for it. I think another law suit revealed that the Contractor actually paid—

Mr. Ruddiman: I object to any reference being made to other lawsuits.

Commissioner Evans: You don't know anything about that lawsuit, do you?

The Witness: No, sir.

Commissioner Evans: All right, leave it out.

A. (Continuing) As a basis of comparison as shown on Exhibit 17-AA, I would like to take just a representative piece of equipment and go across the various columns to show what is shown on this exhibit.

RDQ. 1195. Which Exhibit? A. Defendant's Exhibit 17-AA. Under the first column, under "Item", is the item of equipment.

Under the next column is the number that were on the project that are involved in this claim.

In the next column, that is the third column, is the capital value as reflected by the Bureau of Reclamation "Equipment Rental Schedule". It will be noted that the Contractor has just used this same capital value, although the equipment was not new equipment.

Under the next column is shown the average use per year as set out in the A.G.C. Schedule. Now this is based on the average over the life of the equipment, not one particular year, and this is the basis on which the ownership expense rate was computed by the Reclamation Engineers. In the Contractor's comparable column is "Hours Worked in 1940". This is the figure that the Contractor has entered as the total hours worked during 1940 in the Plaintiff's Exhibit 17-E which I have shown here does not include the hours worked in January, February and March. That is the hours worked for all nine Caterpillar tractors.

The government's column next reflects the ownership expense hourly rate which is \$1.44 compared to the item in the Contractor's computations of \$1.98.

In the next column, under Bureau of Reclamation Schedule is "Maintenance Hourly Rate" which is 24e as compared to the Contractor's maintenance rate of \$1.86.

Next is both the Contractor's and Bureau of Reclamation's Schedules is an item of 51c for fuel and lube cost. This was set up by the Bureau of Reclamation and accepted by the Contractor and is not a part of this dispute.

RDQ. 1196. On that piece of equipment?

Mr. Ruddiman: No dispute on any of the fuel and lubrication rates.

Commissioner Evans: Quite a difference in them.

Mr. Sweeney: The Plaintiff has the same as the Bureau figures on that, Your Honor.

The Witness: In only one case, I think, you will find there is much variation and that is in the Lima shovel. The Bureau used a figure of 97c and the Contractor used \$1.40, which is the same as the Lima dragline. Most of the others are substantially the same.

Commissioner Evans: Go ahead.

A. (Continuing) The Bureau of Reclamation arrived at a total hourly rate of \$2.19, while the Contractor arrived at a total hourly rate for the same piece of equipment of \$4.35.

In both cases the hourly rate was then applied to the total hours of operation of these p. ces of equipment and in performing this work to 1724 arrive at the total equipment allowance fore

the RD8 tractors.

It will be noted over under Panama Canal that the comparable figure of depreciation plus repairs which, in some respects, compares with the ownership expense, is \$2.16. Now this is computed on an entirely different basis as is brought out in the cost report, which is Defendant's Exhibit 17-R. The depreciation, as brought out in this report, is based on a straight line depreciation, taking the value—this is in capital cost figures—by taking the value of the equipment at the beginning of the job and appraised value of the equipment at the end of the job and making a straight line depreciation through the period of operation while depreciation

and ownership, everything, going into make up ownership expense as is shown in Bureau of Reclamation rates and I believe shown in Contractor's rates is based strictly on A.G.C. and the Bureau of Reclamation Equipment Rental Schedule.

It will be noted that on this same piece of equipment, RD8 Caterpillar tractor maintenance, the Eureau of Reclamation allowed 24c per hour and the Contractor allowed \$1.86, and minor repair rates, reflected by the Panama Canal rate is 16.6c per hour.

It will be noted also that the fuel and lube cost allowed by the Contractor in most instances, is higher than the costs are reflected on this Panama

job and that the total hourly cost is at vari-

or the Wunderlich Company rates due to the fact that an entirely different method was used in arriving at the depreciation.

The Plaintiff brought out in testimony in the hearings that the Contracting Officer, in his proposed adjustment for compensation for order for Changes Number Three, had not allowed anything for the moving and remodeling, erection and remodeling, of the screening plant, that is, for equipment. This is not exactly true. The government has allowed the allowance as shown in Defendant's Exhibit 17-F-1 for labor and equipment for both moving and erecting the plant between the period March 28, 1940, and May 11, 1940, and for remodel-

ing the plant between the period May 12, 1940, and June 21, 1940, or a total of, as reflected by Defendant's Exhibit 17-X-1, \$9,583.85 for moving, erecting, and remodeling the screening plant. Then, to make up the capital valuation of the screening plant, goes the items as shown on Defendant's Exhibit 17-AA; that is the separation plan proper valued at \$20,000, a Waukesha motor valued at \$1,-261 and an International Motor valued at \$2,477 and a 50kwa generator valued at \$500.

Also included in the labor as shown in the adjustment of compensation that was proposed to the Contractor, is the actual labor performed during the work of excavating, hauling, and removing plus-five-inch rock from borrow pit number two. This figure that I have just called attention to

for moving, erecting and remodeling of the 1726 screening plant and an allowance for com-

pensation insurance, social security taxes, and unemployment compensation taxes, and ten percent for profit on labor and equipment allowance, is all lumped together under this as labor. Then there is another allowance for materials and another allowance for use of the equipment and operating expense of equipment. In addition to the allowance that was made in this for 1940 which totaled some \$40,400.15, is allowed \$3,800.70 which is on a yardage basis based on the unit cost during 1940, that the unit cost figure to \$40,400.

## By Mr. Sweeney:

RDQ. 1197. Referring, please, to the method followed by the Plaintiff in calculating his hourly rates, tell His Honor please, is that in accordance with the method followed by A.G.C. rates? A. The application generally follows the A.G.C. Manual. The application in arriving at an hourly rate is, possibly, not in strict accordance with the A.G.C. Manual because of the fact that it was impossible to separate this equipment except on an hourly basis. In other words, the equipment was working part of the time on one phase of the job and part of the time on another phase where it could not be charged off by the month. The Contractor submitted his claim on an hourly basis and this was determined by the Contracting Officer to be a reason-

able allowance for the use of his equipment and an equitable adjustment under order for Changes Number Three.

RDQ. 1198. Now, please, with respect to item of depreciation as noted in the A.G.C. Schedule, does the item of major shop repairs included depreciation? A. The item of depreciation is set up on a depreciation, for instance, I'll take a tractor which is an RD8 tractor. Under "Crawler Tractor, Diesel, 95 Horsepower," which is a D8, depreciation on the basis of 20% per year—that is on a five-year life—also set up under the average annual ownership expense is 15% for major repairs, overhauling, and painting. Now if a piece of equipment comes on

a job and is new and at the end of five years is totally scraped, this 20% per year the Contractor has set up as depreciation within a reserve, will replace this piece of equipment. In other words, he has set up 100% cost and could buy a new piece of equipment. It is only reasonable that if the Contractor completely rebuilds this piece of equipment and brings it back up to where it has practically initial value, some portion of depreciation set up is being used for rebuilding the equipment. In other words, if the contractor goes further than making major repairs and completely rebuilds a piece of equipment, it is only reasonable to assume that part of the reserve set up for depreciation is being used for rebuilding of this piece of equipment which would lengthen the life far beyond the five-year life

of that piece of equipment. I think it is a fact
that many contractors run-tractors that are
possibly running eight to ten years.

RDQ. 1199. Tell His Honor please, are these facts you have just stated reflected in the A.G.C. Manual? A. Well, the A.G.C. Manual sets up 20% per year depreciation of a 95-horsepower tractor and also sets up a 15% for major repairs and overhauling and this goes into make up the total ownership expense.

RDQ. 1200. Does it include, please, having repairs or overhauling done in the contractor's shop? A. It does. The major repairs or shop repairs are to include those items of heavy repair which usu-

ally keep a machine idle for an extended period and minor repairs are field repairs.

RDQ. 1201. Now, with respect to the repairs made by the Contractor on this job, were they done at the site of the project or somewhere else? Did he have his own shop? A. He had his own shop, yes. There were times when some pieces of equipment-I don't know exactly when-during these menths there were times on the job when equipment was torn down and completely rebuilt from the ground up. That is, it was torn-

·RDQ. 1202. Did you see that? A. I saw tractors in the Contractor's shop completely torn down to the frame and then repaired, new parts added wherever they were needed.

Mr. Sweeney: Take the witness.

1729 Commissioner Evans: We will recess for lunch. Be back at 1:45.

(Whereupon, at 12:15 o'clock p.m., a recess was taken until 1:45 o'clock p.m., this same day.)

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AFTER RECESS

1:45 o'clock p.m.

Mr. Sweeney: Mr. Walton, refer to letter dated April 5, 1941. There appear to be two letters of that date, however, the pertinent letter is in evidence as a part of the Contracting Officer's Findings and is referred to as Defendant's Exhibit 22 in connection with Claim 17; in the document is Plaintiff's Exhibit C.

Commissioner Evans: Is that the first statement of claim by the Contractor?

The Witness: That is the first detailed statement, he made a statement of claim previous to that but that is the first that broke down the equipment in detail.

Commissioner Evans: That is the one to which we made some reference?

Mr. Sweeney: There are 179 pages and it means microfilming and it is not necessary.

Commissioner Evans: Had you completed your direct examination?

Mr. Sweeney: Yes, that is all.

Recross Examination on Claim No. 17

#### By Mr. Ruddiman:

RXQ. 1203. Mr. Walton, it is true, is it not, that the Contractor began that job with a considerable supply of parts for his equipment A. I can't say definitely as to that. I don't remember seeing very

many come in except periodically after the 1731 job started. I don't remember seeing a great

quantity after—of supplies at the beginning of the job.

RXQ. 1204. You don't remember seeing truck loads of parts brought in from the road job? A. The Contractor used—

RXQ. 1205. You don't remember? A. I don't remember, no.

RXQ. 1206. Did I understand you to testify that

it was common practice to charge parts directly as equipment expense? A. I said that it was the practice of some contractors to do that. I didn't say it was common practice.

RXQ. 1207. Do you know whether that was done on this job? A. I have no way of knowing. I didn't examine the contract. I think it is possible it could have been done.

RXQ. 1208. I take it you have made actual checks of the cost of maintenance on this job, is that correct? A. Oh, that would have been impossible for us to do unless we put a large force of cost keepers and time keepers on the job. We made no effort to keep direct cost of the Contractor's operations by checking them on the job other than the definite items covered by this report put in as an exhibit.

1732 RXQ. 1209. You don't know what his actual cost for maintenance was then? A. I have no way of knowing.

RXQ. 1210. Do you know whether or not the Lima shovel began operations in borrow pit number two approximately around the first of April and continued there all the time until the end of November? A. The Lima shovel?

RXQ. 1211. The Lima shovel. A. I believe, if I remember correctly, that the Lima shovel worked after the shovel was moved into borrow pit two during 1940 that it remained in that pit most of the time.

RXQ. 1212. Practically all the time, is that not true? A. I can't say all the time, I can't say exactly; I probably could figure it up from the records on it.

RXQ. 1213. Was any monthly rental rate used by the government in connection with the Lima shovel? A. It wasn't used with anything, as I explained here in my testimony.

RXQ. 1214. Can you tell me approximately what quantity of cobble fill had to be placed after the end of the 1939 excavation season? A. I can tell you exactly how much was placed—during 1940.

RXQ. 1215. That's right. A. There were 1733 109,927 cubic yards of cobble fill placed in 1940.

RXQ. 1216. It is true, is it not, that the purpose of the separating plant used on this job was to separate the necessary cobbles to complete the dam? A. The separating plant, as I understand,—

RXQ. 1217. Can you answer that yes or no? A. Now let's get that question again.

(RXQ. 1217. was read by the reporter.)

A. No, it wasn't. Part of the cobbles, to complete the dam, was to come from required borrow pit excavation. All rock larger than five inches in diameter was to be removed from materials placed in the embankment and cause from borrow pit and was to go in to make up part of the cobble fill.

RXQ. 1218. In other words, there was some cobble borrow to be done yet? A. I don't quite get your question. I don't understand what you mean. RXQ. 1219. Where were these cobbles to come from? A. They were—the cobbles were to come from required excavation, structure excavation and from plus-five-inch rock that was removed from materials brought in from the borrow pit and from the cobble borrow pit.

RXQ. 1220. At the end of the 1939 season, it is true is it not, that there was some cobble borrow work to be done? A. There were 50,000 yards 1734 shown in the specification.

shown in the specifications, item schedule, to come from cobble borrow pit.

RXQ. 1221. I believe that you testified that certain equipment had to practically be rebuilt when it came on the job, is that true? A. No, I said that a lot of it, tractors, that first came on the job were required to have complete overhauling.

RXQ. 1222. When was that done? A. Done in 1938.

RXQ. 1223. You weren't present in Panama, were you, at any time? A. I have never been—

RXQ. 1224. At the time work was done on that contract? A. I have never been to Panama.

RXQ. 1225. Do you know how the depreciation was figured in Defendant's Exhibit 17-R? A. All I know is what I read in this report. This report, Exhibit 17-R, it will be noted, on page eleven of Exhibit 17-R, that there is set up an original—that is under each item of equipment there is set up an original cost and then also added to that are additional or better, giver, total costs which are taken as the initial value of the equipment.

In the next column is an amount set up as depreciation and the last column sets up sales 1735 returns. The amount as taken as depreciation, to the best of my knowledge, is the amount that this equipment was depreciated during the life of this job.

RXQ. 1226. Is that depreciation made on the same basis as the A.G.C. Schedule? A. Not at all. As I understand from reading this report, this total value of the equipment which includes the original cost plus the additional and betterment is taken and from that is subtracted what is set up here as sales return which was applied to the value at the end of the job and then a straight line depreciation was made over the months that the equipment was in operation.

RXQ. 1227. Do you know whether the rate of depreciation as used in Defendant's Exhibit 17-R, is greater or less than the percentages of depreciation used in the A.G.C. Schedule? A. I haven't checked that. Off hand I would say from a casual observation, as I understand this job extended over a period of twenty-one months. That is a little greater.

RXQ. 1228. A little greater? A. I haven't actually gone through and checked that.

Commissioner Evans: Is that Plaintiff's Exhibit

Mr. Ruddiman: Defendant's Exhibit 17-R.
The Witness: Defendant's Exhibit 17-R.

1736

#### By Mr. Ruddiman:

RXQ. 1229. Generally speaking, would you say that the percentage rate for overhauling, major repairs and painting, as used in A.G.C. Schedule, should be in ratio to the percentage shown for depreciation in A.G.C. Schedule? A. I don't quite understand what you mean.

RXQ. 1230. Let me restate that question. Take, for example, the A.G.C. rate for a crane motor truck, five tons. That shows a percentage of 15% annual cost of overhauling, major repairs and painting, and a percentage of 25% for depreciation. Generally speaking, would you say that in actual experience these ratios would be practically the same as shown in the A.G.C. Schedule? A. No, I would say they would not. In other words, the—you mean for different items?

RXQ. 1231. For different items. A. In fact right here in that same column on that same page we have a motor truck, five ton, we have 25% depreciation and 15% for a major overhaul and repairs. Further down the line, take locomotive, 15% depreciation and 10% for overhaul and major repairs. They would vary with each item of equipment.

RXQ. 1232. Take a r tor truck, five tons; would you say that in actual experience the ratio should be about 15 to 25? A. That depends on what you

are talking about. For a motor crane, a motor truck crane, that is what the A.G.C. sets up here for—

RXQ. 1233. Would you say in actual experience the ratio of overhaul to depreciation would be approximately the same? A. Well, now you are talking about one particular item of equipment, is that correct?

RXQ. 1234. Suppose we take a different piece of equipment? A. Let's take a 95-horsepower tractor; that's a D8 tractor that is involved.

RXQ. 1235. All right, we'll take that piece of equipment. What ratio does that show? A. 20% for depreciation and 15% for overhaul and major repairs; that is for the year. In other words, the depreciation is based on a five-year life, giving 20% for depreciation per year—20% of the capital valuation. Also allowed under average ownership expense is 15% of average ownership expense is 15% of average ownership expense for overhaul and major repairs for the year.

RXQ. 1236. In various jobs, would you say that the ratio would be approximately 15% to 20% as indicated on that piece of equipment? A. Well, I presume that would be correct because that is based on contractor's experience, a contractors' manual. I might say that, maybe some other—let's take a shovel, for instance—might run something different from that. For instance, a crawler diesel  $2\frac{1}{2}$ 

cubic yard shovel, depreciation is 16% and the overhaul and major repairs are 15%.

RXQ. 1237. You would say— A. It is my understanding that this equipment is put out—this schedule is put out by Associated General

Contractors and is based on experience by contractors. No, I don't question its being approximately correct.

RXQ. 1238. I believe that you testified that you saw tractors stripped down to the frame, is that correct? A. I saw tractors in the Contractor's shop at times when they were making major repairs and completely overhauling equipment stripped clear down to the frame. Completely repaired them.

RXQ. 1239. Can you tell me what year that was that you saw them? A. I don't remember exactly. If I remember correctly it was through the winter of 1939 and 1940.

RXQ. 1240. Do you remember approximately when operations were begun in borrow pit number two in the spring of 1940? A. I can tell you exactly. You mean the excavation from the borrow pit, is that correct?

RXQ. 1241. That is correct. A. Excavation from borrow-pit number two, in 1940, started on April 22, 1940.

RXQ. 1242. When was the first embankment placed during the spring of 1940? Do you 1739 remember? A. I believe I can tell you.

(The witness refers to a document.)

A. (Continuing) Embankment placing in 1940 started on March 28th.

Mr. Ruddiman: That's all.

Mr. Sweeney: One question please.

# Redirect Examination on CLAIM No. 17 By Mr. Sweeney:

RDQ. 1243. Tell his Honor please, if you observed the size of the force that the Contractor used for maintenance work? A. The Contractor had, as I remember it/a two and a half ton truck fixed up as a repair truck that ran around over the job making repairs, that is, minor repairs for maintenance for all pieces of equipment. This truck was equipped with some tools and, I believe, it had an acetylene on it and in charge of a mechanic and, I believe, he had a helper. They circulated around over the job—one on each job. Circulated around over the job and made minor repairs to equipment. They not only covered the equipment that is a subject of this item of claim but covered the whole job; everything that was going on, with the possible exception of the screening plant. I believe that some of the labor that is included in the screening plant covers a man who was working at the screening plant and also took care of the maintenance there at the screening plant. In other words-

Mr. Ruddiman: I move to strike what he believes.

Commissioner Evans: Testify only to what you know and what you saw.

A. (Continuing) There was included in maintenance, shown under operation of the screening plant, one man that was in charge of the maintenance.

nance work; but this truck circulated around over the job and made minor repairs and maintenance on all other pieces of equipment. It was occasionally necessary to bring additional men or possibly more mechanics from the shops to assist in making some minor repairs and occasionally it was necessary to bring out an electric welding machine but, as a rule, that force took care of maintenance on the job.

RDQ. 1244. Now with respect to the time the job was completed and the equipment moved off, have you told His Honor what the condition of this equipment was at that time? A. I think I stated that to the best of my knowledge that the equipment hat was moved out early in the year of 1941 was in good condition.

Mr. Sweeney: That's all, Your Honor, please.

Commissioner Evans: Anything more?

Recross Examination on CLAIM No. 17

## By Mr. Ruddiman:

RXQ. 1245. Do you know whether any of that equipment was overhauled during the winter of 1940-'41? A. I know that there was a lot of work

going on in the Contractor's shops immediately after the embankment placing opera-

tions stopped; I think, on November 6th, 1940, and in preparation for, as I remember it the Contractor had already been awarded this job in Panama and he was getting some of the equipment

ready to go down there. I might say practically all of the equipment, major equipment, was moved out of the Vallecito job at the close of the season in 1940; only just a skele in amount of equipment remained in there in consisting of one Lima 901 which is the one in the se, shovel later converted to a dragline and a few of these old worn out Euclid eight-yard trucks brought in from the Wolf Creek job in 1938 and possibly a couple of dozers and possibly one or two carryalls and some, I think, one sheepsfoot roller.

RXQ. 1246. Do you know whether any of the overhauling costs that were incurred after this job shut down in 1940 were charged to this job? A. Plaintiff's Exhibit 17-D shows, up in the title of it, that this was expenditures for the period of April to November 1940 inclusive. The placing of materials in the embankment was suspended on November 6th. A considerable amount of work was done in the shep during the remainder of that month. Whether they are included in here or not Idon't know.

RXQ. 1247. It is true, is it not, that the government also kept costs on the work in borrow pit number two during 1940? A. We kept the costs, as I explained,—it is covered in this report which is fully explained in Exhibit 17-E. We kept costs on various features of the work, on the operations of the screening plant.

RXQ. 1248. Isn't it true that you kept a record of costs and hours on all the operations in borrow

pit number two? A. We kept—no; no, we didn't. Mr. Ruddiman: That's all.

## Redirect Examination on CLAIM No. 17

### By Mr. Sweeney:

RDQ. 1249. Refer, please, to Defendant's Exhibit 17-AA, and the item "Caterpillar Grader". Tell His Honor, with respect to that did you ever have occasion to rent that item of equipment from the Plaintiff? A. There were several occasions during, I think, the latter part of 1939 and possibly once during 1940.

RDQ. 1250. Tell His Honor the facts about that. A. That in doing some road work, force account work—that is, with government forces—we needed a "Teed Grader". We made arrangements with Mr. Stewart to rent this grader for a short period, I think some days maybe we used it two hours and maybe sometimes six hours and sometimes maybe a couple of days in a row and we agreed to a rental rate which had been formerly approved by the Contracting Officer of \$1.25 an hour for

this equipment. It is shown in this schedule 1743 of equipment, Contractor's Schedule, at \$5.54.

Commissioner Evans; Anything further?
Mr. Ruddiman: That is all

Commissioner Evans: I have one or two questions.

## By Commissioner Evans:

RDQ. 1251. Raferring again to Defendant's Exhibit 17-AA, to the column showing "Maintenance Hourly Rates of the Contractor," is it your understanding that the hourly rate there shown was computed on the basis of the costs spent for maintenance during the period of this operation or is that taken from costs extending over a further period of time? A. Well, I have no way—

RDQ. 1252. You don't know? A. I don't know definitely; the Contractor's Exhibit 17, where that period comes from—

Mr. Sweeney: 17-D states that that maintenance cost is for the period April to November 1940 inclusive and that was used to develop this maintenance rate on his Exhibit 17-E.

. Commissioner Evans: Yes.

By Commissioner Evans

RDQ. 1253. Now, referring to Defendant's Exhibit 17-BB, will you tell me again how you reached the conclusion that the percentages shown under "Major Repairs" were not included in the Con-

tractor's maintenance charges? A. The major repair, if you will note by looking at

Plaintiff's Exhibit 17-E, for instance, we can take an RD8 tractor. Under the RD8 tractor, set up under "Approximate Percent of Capital Value Per Month"—

RDQ. 1254. Wait till I find that RD8 tractor.

Which one is it? A. Sixth item down, "RD8 Caterpillar Tractor."

RDQ. 1255. RD8? A. RD8, yes, sir. You will note that there is a figure set up of 5.8%. Now going back to A.G.C. Schedule under "Expense per Working Month" we find there that a set up for "Expense Per Working Month" is 5.8% per month. Now this 5.8% per month is obtained by dividing the total ownership expense percent, which is forty-six, by eight. The average use months per year—

RDQ. 1256. And the 15 is part of the 46? Is that right? A. That is correct. And that is the same under all of these items that are listed under major repair. It is felt that probably this does include major repairs; we have no way of knowing under that maintenance.

By Mr. Sweeney:

RDQ. 1257. On the basis of your experience as an engineer, what would you say to that?

Mr. Ruddiman: I object to what he feels about this case.

· Mr. Sweeney: Off the record, if Your Honor please.

Mr. Ruddiman: And move to strike that part of the answer.

Any questions on what I have asked?

Mr. Sweeney: That is all, if Your Honor please. Mr. Haines, take the stand, please.

1746 Jack A. Haines, a witness produced on behalf of the defendant, having first been duly sworn by the Commissioner, was examined, and in answer to interrogatories, testified as follows:

Direct Examination on CLAIM No. 17

#### By Mr. Sweeney:

Q. 1. Mr. Haines, please, for the record, will you state your full name? A. Jack A. Haines.

Q. 2. Your address, please. A. 1080 York Street.

Q. 3. You are : 1 employee of the United States Bureau of Reclamation, Office of Chief Engineer, Denver, Colorado? A. I am.

- Q. 4. Tell His Honor just what duties you perform, if any. A. I am employed in earth dam design section where I supervise a group of engineers whose duty it is to review and interpret the terms and materials and investigations, laboratory tests, . construction control reports, and the further duty do make periodic visits to the field to inspect earth dams under construction.
- Q. 5. Tell His Honor please, just briefly, the facts regarding your educational background and experience. A. I attended the University of California. I have been with the Bureau since 1934 and have been doing essentially the same

type of work except for a period of one year while I was in the field as materials engineer on a dam under construction in Oregon. Since 1936 I have been in the Denver office in the capacity as previously named.

Q. 6. Now, please, in connection with the performance of your duties, do you have occasion to make field investigations in connection with the Bureau projects? A. Yes.

Q. 7. Tell His Honor, did you, at any time, have occasion to make such an investigation in connection with this job that is in issue here? A. I made a periodic inspection trip on June 27 and 28, 1940, to Vallecito Dam for the purpose of reviewing construction operations as related to design.

Q. 8. Now refer please to Mr. Walton's report in evidence as Defendant's Exhibit 17-E. Now tell His Honor, please, if at any time you had occasion to do anything in connection with that. A. On submission of this report to the Chief Engineer's office, I was given this report by my immediate superior, Mr. F. F. Smith and asked to review the report and make comments to him on it.

Mr. Ruddiman: I move to strike this evidence about what was done within the office of the Bureau of Reclamation.

Commissioner Evans: What is the purpose of this testimony, Mr. Sweeney?

1748 Mr. Sweeney: The purpose of this testimony, if Your Honor please, is to show, first, what that report reflected; what tentative propositions were submitted to the Contracting Officer on the basis of which he was enabled to make his equitable adjustment. The report that we are now following through, if Your Honor please, and showing step by step what was done preliminary to the is-

Suance by the Contracting Officer order for Change Number Three whereby he allowed this equitable adjustment and we want Your Honor to know what the facts are, precise facts. We stated at the opening of our case that we would show that he was not only fair and just but that he was generous.

Mr. Ruddiman: If the Court please, the record in this case shows what the Contracting Officer did, how he made his determination, and I don't think it is any part of this case to say what he didn't do.

Commissioner Evans: Off the record a moment.

(Whereupon, there was unrecorded discussion.)

Commissioner Evans: Let the record show that, the objection is overruled.

Mr. Ruddiman: May I have an exception to this part of the testimony?

Commissioner Evans: Yes, you may.

#### By Mr. Sweeney:

Q. 9. Tell His Honor what you did, please. A. I wrote this memorandum as mentioned before to my immediate supervisor, Mr. Smith.

1749 Q. 10. First, may I ask you, have you an independent recollection touching details of what you did without reference to your memorandum? A. No.

Mr. Sweeney: May he refer to the memorandum to refresh his memory touching these—

Commissioner Evans: You may refresh your recollection and tell us what you now remember about it.

(The witness refers to a document.)

A. (Continuing) From the evidence presented in Mr. Walton's memorandum, it was apparent, based on other Bureau of Reclamation jobs, that no extra payment appeared to be justified because of the fact that only 7% of the entire borrow area contained plus-five-inch cobbles by volume. Other Bureau of Reclamation jobs have been equal to or exceeded that, wherein no payment was made.

Mr. Ruddiman: I am going to object to what is done in other contracts. We don't know what the specifications provided or what the conditions were or anything. We'll be trying every Bureau of Reclamation lawsuit if we don't—

Commissioner Evans: Objection overruled.

#### By Mr. Sweeney:

Q. 11. Tell His Honor please, if the amount of cobble would cover, in borrow pit two, which you told His Honor was 7% by borrow pit volume, tell him whether or not that was an unusual condition,

based upon your experience. A. From my 1750 experience with other Bureau Jobs, it was not an unusual condition.

Q. 12. Now, one more question, please. Referring to the field investigation you made in connection with this job, did you observe the actual conditions in pit number two in connection with your inspection trip? A. Yes, I visited borrow area number two.

Q. 13. Tell His Honor what you saw. A. During the visit; there was a long, open cut made, as I understand, for access roads, giving a fair cross section of the materials to be encountered and on the basis of that it did not appear to have an unusual amount of cobbles compared to other jobs where excavation was not provided for.

Mr. Sweeney: Take the witness, please.

Mr. Ruddiman: May I see the memorandum, please?

Mr. Sweeney: May Your Honor please, this memorandum is not an exhibit.

Mr. Ruddiman: I am entitled to see it if he is going to use it to refresh his recollection.

Mr. Sweeney: That is going beyond the scope of direct examination. There may be other matters in there. Of course we'll be glad to offer the memorandum as an exhibit if my friend will not make exceptions to it; I'll be glad to offer it as an exhibit, and then I won't—

Commissioner Evans: Off the record, please.

(Whereupon, there was unrecorded discus-1751 sion.)

Cross Examination on CLAIM No. 17

#### Mr. Ruddiman:

Q. 14. What was the time that you made your visit to the Vallacito job? A. June 27th and 28th, 1940.

Q. 15. I understood you to talk about some other jobs by the Bureau of Reclamation and in that connection to say that there was no provision for screening, is that correct; where percentage of cobbles ran around seven percent? A. Seven percent or in excess, that's true.

Q. 16. There was no provision for screening?

A. That is, the screening plant operations; there was a standing provision for the removal of plusfive-inch rock prior to rolling.

Q. 17. In those other jobs, did the contract contain any separate price for materials which had to be separated—which had to be screened? A. No.

Mr. Ruddiman: That's all.

Mr. Sweeney: That is all, Your Honor.

Commissioner Evans: Off the record.

(Whereupon there was unrecorded discussion.)

Commissioner Evans: On the record.

Mr. Sweeney: For the record, if Your Honor please, be it noted that in addition to the paragraphs of the specifications heretofore noted, para-

graphs 10, Petition page 50 and paragraph 1752 28, Petition page 28 also pertains to this.

1754 Will the reporter mark these documents please, for identification.

(The documents above referred to, marked "Defendant's Exhibit No. 21-A, 1 and 2," for Identification, are filed in connection with this case.)

(The documents above referred to, marked "Defendant's Exhibit No. 21-B, 1, 2, 3 and 4," for Identification, are filed in connection with this case.)

## By Mr. Sweeney:

Q.1260. I show you a document marked Defendant's Exhibit 21-A, pages one and two. Tell His Honor what it is. A. Defendant's Exhibit 21-A is a tabulation of data that I have made from load counts records showing the quantities of material excavated during the period covered by the claim.

Mr. Sweeney: It is now offered.

## Cross Examination on CLAIM No. 21

## By Mr. Ruddiman:

XQ. 1261. Where was the information obtained from that is shown on this exhibit? A. The information shown on this exhibit was from records of load counts similar to the ones that were given to the Plaintiff's attorney to examine in connection with claim number 1. The information that is on these was secured from the Contractor and shows the

load count per day from the various opera-

XQ. 1262. Are those records of load counts available to inspection by representatives of the Plaintiff? A. I don't think they are here. I think they are available in the files; I think they are available in the Bureau of Reclamation files. I made this up some time ago and I don't know exactly where they are now.

Mr. Ruddiman: No objection, subject to check.
Commissioner Evans: So received.

(The document above referred to, previously marked "Defendant's Exhibit No. 21-A, 1 and 2," for Identification, is now received in evidence and filed in connection with this case.)

Redirect Examination on CLAIM No. 21

## By Mr. Sweeney:

RDQ. 1263. I show you a document which has been marked Defendant's Exhibit 21-B, consisting of four pages. Tell His Honor what it is? A. Take each one separately?

RDQ. 1264. No. With respect to document 21-B-1, tell His Honor what it is. A. This is a photograph taken on June 30, 1939, showing excavation being made in borrow pit number one of number three material. The silt and clay near the surface is being mixed in the excavating operation with the underlying gravel by taking a full-face cut.

of there having been made any tabulation of actual production by equipment either under this equipment or similar equipment doing similar work which would show the normal productivity? A. I have here—I might explain that. This claim is based, apparently—and I guess that is true here by the statement shown in here—only in moving number two material. It will be noted that under

each of these statements, it shows that either the Lima dragline or the Lima shovel or the Lorain shovel worked so many hours and excavated so many cubic yards of number two material. So by that, I take it that this is during the period that the claim is for, is only for impervious material, that is, number two portion of the embankment; is that correct?

Mr. Leonard: I don't know.

A. (Continuing) That is the way it is stated here. I have prepared a tabulation of the data showing the average excavations at all times of material in barrow pit number one and I, during this same period, also show the average production of the dragline and shovel in borrow pit number two for the entire 1940 season.

By Commissioner Evans:

RDQ. 1298. That is based on a tabulation showing— A. How is that?

RDQ. 1239. Based on tabulation and records— A. Based on records; yes, sir.

Commissioner Evans: Off the record a moment.

(Whereupon there was unrecorded discussion.)

Commissioner Evans: On the record.

A. (Continuing) I have examined the government records in which the quantities excavated during each ten-day period from June 20, 1939 to October 20, 1939, which is just a slightly longer period than covered by the Contractor's claim—it was necessary to do this on account of this being

broken down by ten-day periods and have tabulated number two material—the yardage hauled while excavating number two material, the total loads hauled by excavating all types of material from borrow pit number one, and the cubic yards hauled in excavating all types of material from borrow pit number one for each the Lima dragline, Lima shovel and the Lorain shovel.

Over in the first column, under each of these pieces of excavating equipment, I have listed also the hours of operation per month; that is, those hours of operation cover three 10-day periods. The reason I did that was because those are grouped by months. Down at the bottom I arrive at a total cubic yards of excavating all types of material and a total number of hours of operation in exca-

vating that quantity of material. By divid1778 ing the quantity by the number of hours, we
arrive at an average quantity excavated per
hour for each the Lima aragline, the Lima shovel
and the Lorain shovel in excavating all types of
material from borrow pit number one during the
period covered by the Contractor's claim.

It will be noted by comparing the quantities at the bottom of this page, average quantities per hour, with the quantities that the Contractor has claimed is very inefficient due to being required to do mixing of materials, it will be noted that during this entire period, while excavating all types of material, both those covered by the claim and all other material coming from this pit, the Contractor excavated an average of 347 cubic yards per hour, while in its statement of claim it shows that excavating only the materials for which it is claiming additional compensation, to excavated 372 cubic yards per hour or approximately 28 Qubic yards per hour more than the average for the whole operation of the pit. The same thing, going over to the Lima shovel, this tabulation shows that the Lima shovel, during the period it was operating in borrow pit number one between the dates as shown in the Contractor's claim, an average of 324 cubic yards of all types of material were excavated while the quantity excavated shown in the claim for which the Contractor claims was only 80% efficient was 321 cubic yards or approximately the same.

The Lorain shovel excavated an average, during this period, of all types of material, of 219 1779 cubic yards, while shown in the Contractor's claim for which the claim is only 77% efficient, the Contractor shows the shovel excavating 231 cubic yards per hour or approximately twelve yards per hour more than is shown for the average of all types of material.

Commissioner Evans: That is all types, as shown in each of those columns, does that include number two material?

The Witness: That includes number two material. It was impossible for me to break these down. It takes in number two, three, everything taken out of the pit during that period.

## . By Commissioner Evans:

RDQ. 1300. Does the Contractor's claim relate to number two material specifically? A. Specifically number two. That is where this alleged extra mixing was required of the Contractor.

RDQ. 1301. You don't have any figures to show the hours in which the dragline and the two shovels were engaged in taking number two material only? A. Well, I presume the number of hours that the Contractor shows here. I had nothing to check that by but they covered the hours that it was taking only number two material. For instance, on the Lima dragline, it shows here, the Contractor indicates under Lima dragline 1,057 hours as compared with the 1,488 hours that I show. On that basis, I would say that 400 hours of this was excavating

other types of material other than number 1780 two.

RDQ. 1302. Wouldn't that make a vast difference in your average if you divide—take under the dragline — 360,216 cubic yards by 1,057 hours, you would have a lower cubic yard content than you have here, wouldn't you? A. Well, that is exactly what the Contractor has done, I presume, in its statement of claim. It is taking, for instance, under the Lima dragline, instead of showing 360,000 as the government shows in its report, the Contractor shows it excavating 362,000 yards and it has divided that by 1,057 hours. Our records show, during the same period, that only 360,000 cubic

yards of number two material was excavated. In other words, there is a discrepancy of 30,000 yards and, however, the period I am covering is a few days longer than was the Contractor, because of it being broken down in ten-day periods.

Commissioner Evans: All right, go ahead.

A. (Continuing) On all excavation that was made in borrow pit number two during 1940 was made with the Lima dragline and the Lima shovel. Taking the actual calculated yardage, total excavation, from the final statement that was excavated from borrow pit number two during 1940 it amounted to 846,891 cubic yards.

These two machines worked in the pit 3,466 hours. That is not broken down. I have just lumped the two together because it is impossible to say how many of that 846,000 yards was excavated by one machine and how many by the other; but the average production for those two machines in exca-

vating the material from borrow pit number 1781 two for the entire year 1940 was 244 cubic yards per hour—considerably less than the Contractor shows as being only 80% efficiency for the other operation during this period.

Mr. Wunderlich stated in his testimony in the hearing before this Court of Claims the rates used in claim number 21 included the cost of operation of the machine and the labor for the operation. It is impossible, from government records, to check this; that is, check the hours of operation in do-

ing this particular work because there is nothing here outlining exactly where the work was performed and we don't have a breakdown where we can exactly check that.

The items of equipment, in addition to including the excavating equipment, include this so-called efficiency factor has been applied to, includes all equipment that was working with or from that particular piece of excavating equipment.

The hourly rates as shown in the Contractor's, claim, less the labor cost—that is, taking off the cost of the operator from each—are greatly in excess of the equitable rates as computed by the government under claim item number 17 and also are considerably in excess of the rates as claimed by the Contractor under claim item number 17, as reflected by Plaintiff's Exhibit 17-E.

RDQ. 1303. Plaintiff's Exhibit 17-E? A. Plaintiff's, yes, sir. Government records show that 1782 the total embankment placed during each month of the period that is covered by this claim was the highest that it was during any like period during the entire 1938, 1939 or 1940 construction seasons, periods during which embankment was being placed in the dam.

The least amount placed in any one month during this period of operation was approximately 201 cubic yards and during one month there was approximately 310 cubic yards placed. This was the maximum that was placed in the embankment in any one month during the entire job.

In the testimony given for the Plaintiff by Mr. Stewart, Contractor's superintendent, he stated that the Contractor was required to mix materials coming from borrow pit number one during 1939 and that this was not required for excavation made in 1938 and 1940. When stratafied materials such as these were being excavated during 1938 and 1940 the same requirements were required by the government inspectors. However, I might say that during most of 1938 and a good portion of 1939 1940, not 1939 - the materials excavated from borrow pit number one did not consist of strata of sand, gravel, and silt and clay but consisted solely of silt and clay which is a homogeneous material and did not require any mixing. This was only neeessary where we had this deepest part of the cut in sand and gravel, the lower portion was, and the top portion was in silt and clay. However, wherever the Contractor did encounter this type of

material, it was required that the materials 1783 be excavated such that they were properly

mixed as to gradation. It also was the practice of the shovel operators, when operating in borrow pit number two during 1940, to pass the open bucket of the shovel up through the face of the cut between periods of loading out trucks, if there was not a truck standing there waiting. This was the same practice that was carried on in borrow pit number one in which it was very desirable to give a better gradation of the materials.

## By Mr. Sweeney:

RDQ. 1304. Tell His Honor in respect to that point, would it have been possible for the Contractor to have obtained an acceptable gradation of the materials using only the drag line? A. Well. it wasn't—the operation of the dragline wasn't as satisfactory in excavating stratafied materials. In most of the operations in borrow pit number one, the dragline or, I'd say in excavating the greater portion of borrow pit number one, the dragline was excavating only silt and clay that went into the downstream portion of the number two zone and it made no particular difference. The Contractor was allowed then to excavate if they wanted to take off the top portion of material and later drop down and take off the bottom portion of that, it was all right because the materials were homogeneous and there was no difference in gradation of them as we went deeper.

I might say, during the period of this claim, the dragline, as shown by Defendant's Exhibit 21-A, excavated a total of 516,540 cubic yards of 1784 material from borrow pit number one while the Lima shovel only excavated 262,274 cubic yards and the Lorain shovel excavated only 117,896 cubic yards. Thus, the dragline excavated more material than both the other machines put together. In other words, the greater portion of the excavation was made with the dragline.



RDQ. 1305. Tell His Honor, please, if the shovel had been used to accomplish these operations what would have been the result as compared with the operation of the dragline so far as the alleged extra expense is concerned. A. There would have been none. Although the Contractor does include shovels in his statement of claim, I can't see where the amount of passing the open bucket up through the face of the cut, that was done in this pit, slowed down the operations because that was usually done between times while one truck was pulling away and the next one was pulling in or maybe there wasn't a truck right there.

RDQ. 1306. Now, with respect to this alleged loss of efficiency, in what way, if any, would that have been affected by such factors as weather conditions, type of materials, access roads, routing of trucks and so forth? A. This loss of efficiency would definitely have been affected by weather conditions, condition of haul roads, various other factors such as the type of materials being excavated

and so forth. The greatest thing here is the, 1785 method that the Contractor has used in com-

puting this efficiency. In other words, any operation can not be expected to average what the peak day's operation is, I don't care whether it is excavation or what it is. There is going to be some days when operations are going to be much more satisfactory than they are other days. If every day averaged the peak, why, you would have no peak.

RDQ. 1307. Now, with respect, please to this 100% factor of capacity, was that affected in any way by the quantity of equipment the Contractor had on the job or would it have been affected? A. The amount of equipment he had?

RDQ. 1308. Yes. A. Yes, if the Contractor had more trucks—well, I can say this, that possibly some days a truck was laid up or a piece of excavating equipment might have been delayed or slowed up due to not having such trucks hauling from it while another day that Contractor had ample trucks maybe, due to other factors on the job there they could keep trucks shoved up to the dragline naturally the excavation would be higher than it was on some of the other days when there wasn't sufficient trucks operating.

RDQ. 1309. What would be the affect if he had too much equipment on the job? A. Well, the equipment would be standing idle and it seems to me, in trying to make it an efficient operation, he would jerk it off and put it some place else.

1786 RDQ. 1310. Now, in regard to photographs offered as Defendant's Exhibit 21-B, four pages; have you explained to His Honor all the facts that are necessary touching this claim? A. Photograph, Defendant's Exhibit 21-B-4, shows both the shovel and a dragline excavating in borrow pit number one during the period that is covered by this claim.

Commissioner Evans: Mr. Walton, you have covered those photographs pretty well. Limit your

statements to anything illustrative of any testimony you have given since they were put in.

A. (Continuing) The dragline shown in this picture is taking a cut of materials that are unstratified; consist solely of silt and clay; while the shovel is excavating stratified materials.

The same thing is true in Exhibit 21-B-3.

The photograph, 21-B-2, shows what I have illustrated here just now, that the clay and silt, over gravel and sand, has a tendency to stand there and not break down like the sand and gravel does.

The photograph contained in Exhibit 21-B-1 shows a typical operation of a dragline excavating from the bottom of the pit; in this case he is excavating to the water table.

Mr. Sweeney: That's all, Your Honor.

Mr. Ruddiman: Before you proceed, reference was made sometime ago to a tabulation showing the production of machines generally, based on compu-

tations. Which exhibit is that?

1787 Mr. Sweeney: That was 21-A.

Commissioner Evans: 21-A.

The Witness: The total excavation in borrow pit number 2? It is 21-A-2.

Commissioner Evans: Yes. For the whole year 1940?

The Witness: The whole year of 1940 in borrow pit number two. That is on the opposite side of the river from borrow pit that this claim involves in that it is merely shown as a comparison of what was done in that whole season and that material

is from actual calculated yardage and the operation of those two machines have been accurately kept during that period.

Recross Examination on CLAIM No. 21

## By Mr. Ruddiman:

RXQ. 1311. What about the difference of material in borrow pit one and two? A. The excavation of material from borrow pit one would have been higher than from borrow pit two.

1792 RXQ. 1329. After making this groove, wouldn't he have to widen it to the full face of the cut, say fifteen feet? A. Widen it as he made his excavation, yes; as he loaded it into trucks and made excavations and loaded it out.

RXQ. 1330. On this job, Mr. Walton, wouldn't you expect to get your greatest rate of production during the year 1939—production of materials placed in the embankment? A. Well, I think, yes—I would say that we did get the greatest there.

RXQ. 1331. You would expect to, would you not, under the plan of operation involved in this case? A. Well, I would say that the production of the materials from borrow pit number one was more rapid than it was in borrow pit two.

RXQ. 1332. Also more rapid than the required excavation, was it not? A. A great deal of the required excavation being made in 1939, yes, it was more rapid than the required excavation. It was easier digging.

RXQ. 1333. And there was more required excavation, I take it, in 1938 than there was in 1793 1939? A. No, I believe there was more in 1939. The bulk of the spillways was excavated in 1939—the bulk of the yardage out of the spillway.

RXQ. 1334. I take it the ratio of borrow to required excavation was greater in 1939 than it was in 1938? A. Yes, and it was greater in 1940 than it was in 1939.

RXQ. 1335. In 1940 most of your excavation came out of borrow pit number two, is that correct? A. No, it came out of borrow pit number one and borrow pit number two. In the total job, there was approximately two and a half million yards excavated from borrow pit one and one million yards from borrow pit number two. Approximately 850,000 yards of excavation from borrow pit number two was made in 1940. If you want them, I can give you the exact figures that were taken. I don't have here the exact yardage taken from borrow pit one during 1939 or during 1940. I have got the total excavated from the pit but you don't have it broken down.

RXQ. 1336. More than 850,000? A. I think it would have been a little less.

RXQ. 1337. It does make a difference then as to where you are working as to what your production rate is? A. It makes a difference; there is a lot of things that come in—

RXQ. 1338: Will you answer the question.

1794 first? A. Lets have the question again.

(Whereupon the last above question was read.)

A. Yes, I would say it would.

3.

RXQ. 1339. If a truck is delayed while it is waiting at the shovel or dragline to be loaded, doesn't that truck suffer a loss of efficiency as far as production is concerned? A. I will have to qualify that to answer it. I would say, if the truck is delayed it would naturally slow down production. However, if the truck is delayed and this is an operation that is going on all the time, the Contractor should reduce the number of trucks that is under the shovel so that the truck isn't delayed.

RXQ. 1340. Would you say that the materials excavated at borrow pit number one during the period covered by this claim were difficult to excavate? A. During the period—

RXQ. 1341. Of Claim 21? A. Oh, I would say they were average for the whole operation of borrow pit number one. They were about average.

RXQ. 1342. Get about average production for earth excavation? A. About average production. Get higher production from borrow pit number one than you would from borrow pit number two.

Mr. Ruddiman: That's all.

2197 Charles A. Burns, a witness produced on behalf of the defendant, having first been duly sworn by Justice Madden, was examined, and in answer to interrogatories, testified as follows:

2198 Direct Examination

## By Mr. Sweeney:

Q. 1. Mr. Burns, for the record, will you state your full name. A. Charles A. Burns.

. Q. 2. And your address? A. Denton, Texas.

Q. 3. Now, will you indicate, please, for the record, your experience either in private business and the government and so forth and then your present business? A. I entered the— Well, before entering the government service, I was assistant engineer with the Santa Fe in construction work. I entered the government service in 1913. In 1919, I was appointed construction engineer at Elephant Butte Dam.

In 1922 I left the government service and went with the El Paso Bitulithic Company as general superintendent in charge of all their operations out of El Paso.

In about 1924, I believe, I went back with the government in the Indian Service, and in 1925, I visited the Pine River Dam site for the Indian Service and about that time I was appointed assistant supervising engineer in the Albuquerque office for the Indians.

I think it was in '35 when the appropriation was made for the Pine River Dam. I again transferred

back to the Bureau of Reclamation as con-2199 struction engineer.

In '41 I entered the Army as a Major in the Engineers and was assigned as Regional District Engineer for the Hobbs District, which comprised seven large air fields under construction and later was assigned to McCloskey General Hospital; and let's see, I was discharged from the Army in April, must have been '45, and entered business for myself as air conditioning, and in the meantime I have a plant where I build hospital beds, a bed that I developed when I was in the Army, for special treatment of patients that do not have good circulation in the body.

Q. 4. That is the Burns Mechanical Circulator?

A. Yes, sir. It has been on the market for over a year.

By Justice Madden:

Q. 5. Where is that plant? A. At Denton.

By Mr. Sweeney:

Q. 6. Now, Mr. Burns, with respect to this job, that is, the Pine River job, and the construction of the dam, you were the construction engineer? A. That is right.

Q. 7. Will you outline briefly just what duties you performed on that job and your relation to the contracting officer? A. Well, the duties of a construction engineer is head of an organization in

which we have a chief clerk, office engineer, 2200 field engineer, a man in charge of the laboratory, and various other heads as necessary; and it is more of a coordinating job, and I would say that as construction engineer, you are a representative of the contracting officer.

Q. 8. Now, with respect to this job, tell us who was the contracting officer. A. Mr. S. O. Harper, Chief Engineer.

## By Justice Madden:

- Q. 9. I didn't hear that title. A. Mr. Harper, S. O. Harper, Chief Engineer.
- Q. 10. Chief Engineer of what? A. Bureau of Reclamation.

Mr. Sweeney: And for your information, please. Mr. Harper was the contracting officer who signed on behalf of the Bureau.

## By Mr. Sweeney:

Q. 11. Now, please, Mr. Burns, with respect to claims for extra work arising under this contract or any similar contract, in your capacity as construction engineer, what did you do with respect to such claims for extra work? A. They were all referred to the Denver Office for consideration and they have a special section in the Denver office that handles extra work orders, and then, of course, if they were prepared there and sent to the field for further information and sometimes back and forth, maybe a time or two, but finally it was referred into

the Denver office and finally came out of there with full instructions as to what to do . 2201 with them.

Q. 12. Now, as in the case that we have before us, when the job is finished and a contractor is making claims for extra work, can you tell His Honor just a little more detail about what you do with respect to such matters, just how far your authority goes? A. Well, when the job is finished, we might say a final report is made and in that must be compiled the claims and some recommendations on what should be done with them and sent to the Denver office for the particular sections that work directly under the chief, to make the final analysis of them and preparation-we might say, that is what I mean by analysis, they make the final preparation and disposition.

Q. 13. Now, please, we show you a document marked Defendant's Exhibit P consisting of seven

pages. Tell His Honor what it is, please.

Justice Madden: That is already in evidence? Mr. Sweeney: No, Your Honor, we are having it marked and we will offer it. This is a new one.

(The document above referred to was marked Defendant's Exhibit P for identification as requested.)

A. This is a letter from the construction engineer, Vallecito Dam, to the chief engineer, and refers to: Claims Martin Wunderlich Company

and— You don't want to go into too much detail with it.

2202 Q. 14. Just tell His Honor what it is. A.
It refers to Item 5 of the claim and there is attached to it—

Q. 15. Give His Honor the date, please? A. April 2, 1940.

Q. 16. Is that your signature thereon? A. This is my signature.

Q. 17. It is your letter? A. Yes, my signature.

Q. 18. Just in a little more detail describe what the attachments are, if they are referred to in the first paragraph? A. Yes. Attached to Mr. Wunderlich's letter was a revised submission of claims. I am reading paragraph 3. I think that probably I'd have to—

Q. 19. Just read it into the record. A. I'd have to read it. I will read paragraph 3. I am not entirely familiar— "Attached to Mr. Wunderlich's letter was a revised submission of claims. Reports will be prepared on each item and forwarded as rapidly as they can be assembled. There are many misstatements in Mr. Wunderlich's—

Mr. Ruddiman: I am going to object to the reading of this inter-office communication into the record here.

Mr. Sweeney: Your Honor, he is describing what it is and plaintiff is submitting to him his claims and then in due course Mr. Burns, as construction

engineer, of course, is forwarding that to Mr. 2203 Harper. This is one of these inter, not one

of the intra-office communications; it is from

a subordinate to a superior.

Justice Madden: I take it that Mr. Burns is restating now under oath what he said there and you will have an opportunity to cross examine him about it.

Mr. Sweeney: Yes, sir.

Justice Madden': Objection overruled.

A. (Continuing reading) "all of which will be answered in our discussion of his claims."

There is attached a letter from Mr. Wunderlich to Mr. C. A. Burns, Construction Engineer, dated March 25, 1940, which in turn deals with Claim No. 5. I also notice there is a letter from Mr. C. A. Burns, Construction Engineer, to Mr. Wunderlich dated February 26, 1940, which in turn deals with the letter of March 25th. This letter brings out the fact I did discuss Claim 5 with Mr. Wunderlich and in adding up the figures in Claim 5, I included an item of \$1,007.00 twice and that is what this letter refers to.

I wrote to Martin and told him I had made an error. That is what this refers to and I said in there: "I regret that this error was not found when we were discussing this claim and would appreciate your giving me your views."

In other words, when I was discussing it, I added in one item twice in there and that is what this item here refers to. 2204 Then there is a— I don't think this memorandum of conference is attached to this. I don't think it was part of this letter. I sent him.

Mr. Sweeney: The document is now entered.

A. (Continuing) That is an office memorandum. I don't believe that was attached to the letter.

Justice Madden: Does it still have seven pages?

Mr. Sweeney: Three pages, if Your Honor please; now it is three pages.

Pardon me. I think it does relate to it because it is the plaintiff's. We are going to— This is the plaintiff's here. Yes, that is attached to it.

Mr. Ruddiman: This is supposed to be an exhibit,

Mr. Sweeney: That is part of the seven pages that were originally offered.

Justice Madden: We are seven again?

#### By Mr. Ruddiman:

Q. 20. Your letter to the construction engineer, I take it, was prepared after the work had been performed on Item 5, is that correct?

Mr. Sweeney: May Your Honor please, what letter is the counsel referring to? It is dated. He knows whether the job is finished.

#### By Mr. Ruddiman:

Q. 21. Your letter of April 2, 1940?

2205 By Justice Madden:

Q. 22. When was the work finished? A. Well, now, I'd have to just—

Mr. Sweeney: Fall of 1941.

A. (Continuing) You are referring to Claim 5?

By Mr. Ruddiman:

Q. 23. Yes. A. I think that is true. I think this is after the work was finished. I believe that is true.

By Justice Madden:

Q. 24. You mean after the work involved in Claim 5? A. I am sure, because we wouldn't have been trying to arrive at the price if the work hadn't been finished. I am sure that is correct. I am sure counsel is correct on that. It was after the work was finished.

Mr. Ruddiman I am going to object to this exhibit as proof of the facts stated in the letter from the chief engineer to the construction engineer.

Justice Madden: Well, I think it is not valid as such proof. Here you have a chief engineer on the stand and I think whatever the facts are, he ought to—

Mr. Sweeney: Construction engineer, Your Honor. During the course of the work he is communicating to the chief engineer certain facts and information regarding the claim on the basis of which

the chief acts. It is one of these kind of com-2206 munications the Supreme Court refers to in

McCoy versus The United States, 193. They are written during the job and they are written from the subordinate to a superior, on the basis of which the superior officer makes his decisions; and

m the Rosser case, in No. 46, our Court of Claims said that such documents are admissible; in fact, that the whole case could be presented, that is, the whole case so far as the defense was concerned, could be presented to the Court on the basis of such documents.

Justice Madden? I think these documents are admissible for the purpose of showing that the construction engineer communicated certain information to the chief engineer.

Mr. Sweeney: And in turn, if Your Honor please, the contractor is submitting his claims to Mr. Burns; Mr. Burns is reviewing them, submitting his recommendations to the chief engineer in Denver, on the basis of which the chief engineer and the contracting officer ultimately makes his decision regarding the particular claim.

Justice Madden: It certainly is evidence of the fact that the construction engineer did submit these claims and that the chief engineer made his response, whatever it was, to them.

Mr. Sweeney: That is what it is offered for, Your Honor.

Justice Madden: It may be admitted.

(The document above referred to, previously marked Defendant's Exhibit P for identifi-2207 cation, is now received in evidence and filed in connection with this case.)

Mr. Ruddiman: Do I understand, Your Honor, it is not admitted as proof of the facts stated in the letter?

Justice Madden: No, I should think it is not proof. I mean, so far as the facts stated by the construction engineer in his letter, he ought either to testify independently about them or at least under oath adopt these statements as his present testimony.

## By Mr. Sweeney:

- Q. 25. Now, with regard to this document, Mr. Burns, please, the memorandum attached to it, pages 4 to 7, inclusive, is that the memorandum referred to in paragraph 3 of your letter to the chief engineer? A. It is.
- 2212 Q. 41. Tell His Honor, please, are those facts set out in the equipment rental rate of the Bureau which is in evidence on behalf of both sides, and I think it is Defendant's Exhibit— A. Yes, this is the rental rates we used as the basis for whatever claims fell under this at the dam.
- Q. 42. For the record, please, will you just make clear to the Court what you are referring to, what is the Bureau rates for what year? A. Well, this is published, this particular one we used, was published January 2, 1940.
  - Q. 43. Now, the job began in 19— When was it, '37 or '38? A. '37.

Well, now, I don't think there was any rate on the job at the beginning. We may have had something, but I don't recall any right in there.

Q. 45. Now, tell His Honor, please, if the 1940 rates are a revision of the 1937 rates? Does it show

on its face? A. Yes, this schedule supersedes the schedule issued by this office under date of September 1, 1937. That would be—the first one came out about '37.

Q. 46. So as we understand it, the Bureau rates promulgated are the rates that would guide you in making recommendations? A. That is right. We had no recommendation in that whatever. That is established by the Denver office.

2213 Q. 47. Now, please, we show you a document marked Defendant's Exhibit Q. Tell-His Honor what it is, please.

(The document above referred to was marked Defendant's Exhibit Q for identification as requested.)

A. Letter dated Vallecito, Colorado, April 30, 1941, from the construction engineer to the chief engineer. The subject is: Claim for adjustment under Order for Changes No. 3, Vallecito Dam, Pine River Project, Colorado.

Q. 48. Just refer, please, to pages 2 and 3 and just give the substance of just what you—of the purpose of that letter, what it relates to? A. It relates to the transmitting to Martin Wunderlich Company of Jefferson City, Missouri, Order for Changes No. 3, dated August 31, 1940. "Order for Changes No. 3, among other things, provided that Any claim for adjustment in the amount due under the contract by reason of the changes shall be stated and filed with the contracting officer within 90 days

from the date of this order unless the contracting officer shall; for proper cause, extend such time.' Under date of November 22, 1940, the contractor requested an extension of 30 days. Under date of November 25, 1940, the Chief Engineer granted such an extension."

Q. 49. It won't be necessary to read all the letter, please, Mr. Burns, but in that letter do you refer

to this issue of rental rates that has been 2214 made so prominent in this case, that is,

equipment rental rates? A. On page 2, paragraph 5, quote, "Under date of April 17, 1941, your office furnished us a tabulation of equipment rental rates to be used in checking the contractor's claim. While the Martin Wunderlich Company stated in their letter of January 11, 1941, that their rental rates were in accordance with the A. G. C. rates, it will be noted that the rates they used are considerably higher than the rates furnished us by your office. The attached tables have been prepared for the purpose of comparing cost using the hours of labor and equipment as shown on the schedule submitted by the Martin Wunderlich Company, the rental rates per hour as computed by the Bureau of Reclamation, and the rental rates per hour as used by the Martin Wunderlich Company. It will be noted that the total for equipment rental based on the Bureau's rental rates is about one-half of the amount as computed by the rates used by the Martin Wunderlich Company."

There is three pages of this, of course.

Q. 50. And in that letter you make your recommendations to Mr. Harper, the contracting officer, with regard to the claims? A. Yes, sir.

Mr. Sweeney: Now this document, if Your Honor please, is offered as Defendant's Exhibit Q subject to verification. It is a copy.

2215 • Mr. Ruddiman: I have no objection to the admission of this letter merely to show that such a letter was sent by the construction engineer to the chief engineer, but I would object to it as proof of any facts stated therein.

I have one further objection, that I think the letter is already in evidence.

Mr. Sweeney: That is possible and I have tried to check, if Your Honor please. I did before I left Washington, but I was so busy on other cases— It is possible it was in evidence. I am not positive of that.

The purpose of this document and this chain of evidence is to refute plaintiff's contention that he entered into an alleged agreement with Mr. Burns regarding rental rates because Mr. Burns during the actual progress of the work, is informing his superior in Denver, the contracting officer, that the rates that are being used by the plaintiff are perhaps a hundred per cent over the so-called Associated General Contractors rates.

Justice Madden: It may be admitted.

(The document above referred to, previously marked Defendant's Exhibit Q for identification, is now received in evidence and filed in connection with this case.)

Mr. Sweeney: Please mark this R.

(The document above referred to was marked Defendant's Exhibit R for identification as 2216 requested.)

#### By Mr. Sweeney:

- Q. 51. We show you a document marked Defendant's Exhibit R. What is it? A. Letter dated May 22, 1940, Denver, Colorado, from the Acting Chief Engineer to the Construction Engineer, Vallecito, Colorado. The subject is: "Claims of the contractor for ad ustments in price of excavation in earth borrow pit on left side of river—Vallecito Dam—Pine River Project." This letter, I'd say, comprises three pages.
- Q. 52. Do you identify Mr. Harper's signature thereon? A. Yes, that is Mr. Harper's signature.
- Q. 53. Tell His Honor, please, if this letter contains the instructions from Mr. Harper to you regarding his efforts to arrive at an equitable adjustment of this claim under contract? A. It goes on to state: "Mr. Martin Wunderlich visited this office on Thursday, Friday, and Saturday of last week, and discussed at length with the engineers of the office the problems of the separation of the cobbles from the earth fill material in borrow pit No. 2, now being worked,—" I believe that covers that, doesn't it?
- Q. 54. Yes, that is sufficient, and then tell His Honor, please, does he indicate to you just the procedure that would be followed by you in making your recommendations and in calculating what ad-

ditional costs, if any, would be allowed? A. 2217 Well, I am going to read just a part of this

to sort of get it clear in everybody's mind, part of paragraph 4. I'd say the last sentence of paragraph 4 shows it clearly, after this discussion in Denver by the engineers with Mr. Wunderlich's representatives.

"Finally, after much discussion, during which no agreement could be reached, Mr. Wunderlich made a final verbal proposition, which is understood to be as follows:"

Then these are Mr. Wunderlich's suggestions, I believe.

Q. 55. Now refer, please, to the last sentence of paragraph (d) where it says: "In figuring these costs, our monthly rental schedule for equipment will apply." Now, with respect to that, tell His Honor, please, did you at any time while you were the construction engineer on this job use any other figures than those that were authorized by the Bureau? A. No, there were none other used.

Q. 56. Could you have done such a thing, Mr. Burns? A. No, because our recommendation would have to go into Denver and of course they would use this schedule of rental rates regardless of what we used. If we used any schedule other than that authorized, it would be disallowed in any event.

Q. 57. Referring please to the equipment rental rates promulgated by the Bureau sometime back in 1937 which they state on their face followed the A. G. C. rates? A. Yes.

2218 Mr. Sweeney: This document is now offered, if Your Honor please.

#### By Mr. Ruddiman:

Q. 58. What is the final adjustment by the Bureau on this claim made on the basis indicated in this letter of May 22nd from the acting chief engineer to you? A. I believe you are referring—I will go a little further, just in passing, so it might clear up your point. We kept time and Mr. Wunderlich kept time. We were all in accord, so we accepted his time. Is that one of the points you want to bring out? Now, then, the rental rates were those referred to in here, are in that book, are the ones we used. Is that the point?

Two things were involved, time and rates, in computing the final cost. We were all in accord on the time. There was no difference of opinion on that at all. Mr. Wunderlich's time corresponded with ours in a matter of hours; nothing at all. The rates were those compiled by the Bureau. Is that correct?

Q. 59. Do I understand from your testimony then, that in making the adjustment for the cobble borrow claim, you followed the basis set out in these instructions? A. Well, now, let's see. I pointed out here—Now, this may be a slight—I was just saying now, I didn't want to confuse this in here because some of this statement is just what was talked of verbally in Denver.

2219 Now, then, when it comes down to this part here, in figuring the cost, our monthly

rental schedule for equipment applied. Yes, absolutely, that is what we used.

## By Mr. Sweeney:

Q. 60. Please tell His Honor where these rates were fixed? A. They were fixed in Denver in that rental schedule that was admitted in evidence.

Mr. Sweeney: That equipment schedule, if Your Honor please, is in evidence by both sides.

A. (Continuing) Yes, that is true; that is what we used.

# By Mr. Sweeney:

Q. 61. Tell His Honor if the computations prepared in the Denver office, so far as you know, also have been submitted to the contractor? A. I believe they were submitted in an extra work order. I have just forgot the number of the work order, but they were all submitted as an extra work order to the contractor.

Mr. Sweeney: Your Honor, just a few material issues in this whole law suit—we have gone into the details heretofore—just these two major points we are covering today.

## By Mr. Ruddiman:

Q. 62. Well, isn't it true that this letter discusses an offer which was made by Mr. Wunder-

lich and which was never accepted by the government? A. Well, that is why I say there are several things involved in that

letter. You have to pick out those things that are pertinent only. It is rather involved except as to the pertinent points.

Mr. Sweeney: If we may show it in the proceeding, the record shows, if your Honor please, that Mr. Wunderlich's offer was not accepted. That is one of the reasons we are here now, why we are here.

Mr. Ruddiman: I am going to object to this exhibit here. It discusses certain negotiations. It is written by Mr. Harper. I don't see that it is material to anything involved in this case.

Mr. Sweeney: Your Honor, then we will have to go to San Francisco. I have done my utmost to avoid that—go for no other purpose than to have Mr. Harper identify his signature and state the facts that are in that letter.

Justice Madden: What is it you think is relevant; just the statement about these rental rates?

Mr. Sweeney: That is all we are relying on now, Your Honor, to show the claim as presented by Mr. Wunderlich to Mr. Harper, the contracting officer. Mr. Harper in turn is informing his construction engineer what has occurred and then he is indicating to him, particularly on page 2, the basis of Mr. Wunderlich's claim, and then is telling him that in computing the claims, the rental

rates follow the Bureau's equipment rental 2221 rates. That is all I am offering it for.

Justice Madden: You don't think the letter is admissible to conclude Mr. Wunderlich with regard to any of these terms that he may have made?

Mr. Sweeney: No, absolutely not. Mr. Harper may have misunderstood what he said. I had an occasion like that—

Justice Madden: What do you say?

Mr. Ruddiman: I have no objection if it is admitted with the understanding it is not admitted for proof of the facts stated in the letter.

Justice Madden: It may be admitted.

(The document above referred to previously marked Defendant's Exhibit R for identification, is now received in evidence and filed in connection with this case.)

Mr. Sweeney: Please mark this Defendant's Exhibit S.

(The document above referred to was marked Defendant's Exhibit S for identification as requested.)

## By Mr. Sweeney:

Q. 63. Now we show you a document marked Defendant's Exhibit S. Tell His Honor what it is and indicate the date of the letter, and that you signed it. A. It is dated Vallecito, Colorado, February 17, 1941, from the construction engineer to the chief engineer. The subject is: Preliminary

Report—Claim for adjustment under order 2222 for changes No. 3 — Vallecito Dam, Pine River Project, Colorado." You want to—

Q. 64. Just briefly tell His Honor what it is. Don't read it; just the substance of it. A. I am just trying to get the substance of it here. Mr. Wunderlich is returning order for changes No. 3. We have prepared a report of the contractor's operations in Borrow Pit No. 2. Our report that we submitted—I am going to just read a sentence here. "Our report approaches the costs at an angle catirely different from that of the contractor, in that the contractor's costs are for the complete operation of Borrow Pit No. 2, while our report deals only with the cost involved in the separation of the materials."

Q. 65. Now refer, please, to paragraph 4 on page 2 and to that part of the paragraph which says "our results would be as follows:" and refer to the fact "the equipment rates used by the contractor are about one hundred percent over the proper A.G.C. rates." Now, do you recollect that? A. Something of that nature in here. Yes, here it is on page 2, under paragraph 4. I will just read the entire paragraph, Then it will clear it so everybody will be clear on it.

"For convenience we will assume that the labor items, insurance and taxes, and dynamite and supplies are correct, using the contractor's figures for

these items and his hours shown for equip-2223 ment, our results would be as follows: the equipment rates used by the contractor are about one hundred percent over the proper A.G.C. rates." Mr. Sweeney: This letter is now offered, if Your Honor please, as part of a chain of evidence to show the Court that Mr. Burns, as the defendant's contracting officer, followed the rates that were promulgated by the Bureau of Reclamation and not by such an agreement as purports to be evidenced by Plaintiff's Exhibit 2-A.

Justice Madden: When you said, Mr. Sweeney, that Mr. Burns as the defendant's contracting officer—

Mr. Sweeney: Mr. Burns is the defendant's construction engineer. I want to make that distinction clearly. Thank you for correcting me.

A. (Continuing) I forgot to add that on that letter, my signature is on that letter.

# By Justice Madden:

Q. 66. Is the main office of the Bureau of Reclamation in Benver? A. Yes, sir. The chief engineer is in Denver where all construction matters are handled.

Mr. Sweeney: Mr. Wunderlich is in Denver, too, Your Honor. He is a Denver contractor.

Mr. Ruddiman: If the Court please, I have no objection to the admission of this letter as show-

ing that such a letter was sent from the chief engineer to the construction engineer, but

I do object to any statements in that letter as proof of the facts stated.

Justice Madden: Well, it may be admitted.

(The document above referred to previously marked Defendant's Exhibit S for identification, is now received in evidence and filed in connection with this case.)

Mr. Sweeney: Please mark this next as Exhibit T.

(The document above referred to was marked Defendant's Exhibit T for identification as requested.)

# By Mr. Sweeney:

Q. 67. Now, we show you a document marked Defendant's Exhibit T which purports to be a copy of a letter dated August 24, 1940 from the construction engineer to the chief engineer. Tell His Honor, please, if that is your letter and explain it in some detail. A. This is a letter dated August 24, 1940 in Denver, Colorado, from the construction engineer to the chief engineer. The subject is: "Proposal submitted by the Martin Wunderlich Company in reference to borrow pit No. 2".

It refers in paragraph 1 to—I now quote: "Under date of July 10, 1940, order for changes No. 2 was transmitted to the Martin Wunderlich Company. The order for change was for the express

purpose of settling the controversial ques-2225 tion of cobble borrow area from which cobbles were to be obtained for the construction of the Vallecito Dam." Paragraph 2 is as follows: "As originally planned, the cobble borrow pit was shown to be below the dam and on the left side of the river. During the contractor's operations, he elected to set up his screening plant on the left side of the river in earth borrow pit No. 2 and about 1,000 feet upstream from the left abutment."

Paragraph 3: "The operations in earth borrow pit No. 2 revealed that in the area adjacent to the contractor's screening plant the material excavated yielded about twenty-one percent plus five-inch cobbles and since the yield was heavier than would ordinarily be expected, a certain area of earth borrow pit No. 2 was designated as cobble borrow pit in lieu of the area below the dam which was not at all convenient for the contractor's operations."

Paragraph 4: "While the increase in cost as shown in the order for change was \$30,000.00, it is believed the amount excavated plus overhaul would have been in the amount of \$42,000.00 which we believe was a fair and equitable offer to the contractor."

Paragraph 5: "This order for changes No. 2 was returned to your office by Mr. Martin Wunderlich in person on August 21, 1940, with the statement that 'this order was not acceptable to him'. It must

be assumed that his letter of July 19, 1940, 2226 was written as a counter-proposal in lieu of order for changes No. 2".

Paragraph 6: "In compliance with your request,"

this office has analyzed the proposition submitted to your office and find that:

"(a) The Martin Wunderlich Company is attempting to set up all of earth borrow pit No. 2 as cobble borrow pit (with the exception of 80,000 cubic yards excavated in the fall of 1939) for which he requests payment of thirty-two cents per cubic yard.

"(b) No price per cubic yard is mentioned for the 80,000 cubic yards excavated in 1939; however, previous correspondence indicates he expects thirty-five cents per cubic yard plus overhaul for sepa-

rating the rock by rake-dozer on the fill."

"(c) The Martin Wunderlich Company further recites that if the cost for the work is less than thirty-two cents per cubic yard, then the Bureau would not be required to pay more than the cost plus ten percent."

We then go on to set up a table of three items, present contract price, order for changes No. 2, and the contractor's proposal, to show what the difference in amount would be. You don't want to go into all that?

Q. 68. No, not the detail, but refer please to the last, to paragraph 7 and please read that in the record and tell His Honor is that the recommenda-

tion you made? A. Paragraph 7: "The con-2227 tractor's counter proposition would increase the cost of construction by the amount of \$121,823.80, or twelve and a half cents per cubic yard on every cubic yard excavated from earth borrow pit No. 2, whereas the actual cost of screening is less than five cents per cubic yard, a figure previously discussed. Mr. Wunderlich's proposition does not appear to have any merit whatsoever and we recommend no consideration be given it.

"8. Since it is felt that a reasonable offer was made to the contractor as settlement for the work involved in order for changes No. 2, which would amount to \$42,795.00, it is our opinion that in returning the order for changes as not being ecceptable fo him, the contractor should be notified to proceed with the work in compliance with the specifications and that no further negotiations be carried on."

It is signed by C. A. Burns,

Q. 69. And is that a copy of the letter and do you now recollect it, Mr. Burns? A. Yes, sir.

Mr. Sweeney: It is now offered.

# By Mr. Ruddiman:

Q. 70. Mr. Burns, payment was never made under change order No. 2, was it? A. Why, I think—Well, I'd say it wasn't, no. It's made an excep-

tion in the final payment, I believe. In other words, in the final payment, I believe Mr.

Wunderlich made a lot of exceptions and the payment was never made. Now, we did do this, we paid him, I believe, twenty-three cents per cubic yard. Q. 71. My point is this, isn't it a fact that payment for the cobble borrow was made under change order No. 3 rather than under change order No. 2? A. Now, you have to get me some information on that because right off hand, I'd have to look that up. I just couldn't tell you. I just wouldn't know. I don't have that information. As I say, it could be ascertained. I don't know.

Mr. Sweeney: The facts are all in the record for the information of the Court.

A. (Continuing) I don't know. I really don't.

Mr. Ruddiman: If the Court p ease, I am going to object to this letter from the construction engineer to the chief engineer. It relates to change or der No. 2 which the record will show was never followed by either party. The government made payment on the basis of change order No. 3, an entirely different change order, entirely different method. I don't see the relevency of any recommendations as to payment under change order No. 2. It was never followed.

Mr. Sweeney: This was part of the negotiations, obviously, between Mr. Burns and the contracting officer, and of course no payment has been made

under either order, whether 2, 3, or any 2229 other, and all the details, facts regarding that, were presented to the Court in Denver.

We are now showing to the Court what Mr. Burns did during these negotiations with regard to the settlement of these claims and particularly with

respect to this issue of the so-called alleged rental agreement. You see, the plaintiff has put—

Justice Madden: I didn't hear anything in this letter about rental rates.

By Mr. Sweeney:

Q.72. Tell His Honor, please— Justice Madden: Is there something there?

By Mr. Sweeney:

- Q. 73. In calculating this sum of \$42,000 that you recommended, did you have to use equipment rental rates? A. I have to go into this a little bit now because—
- Q. 74. Tell His Honor, please, with respect to the details regarding this document, were they prepared by you or one of your assistants, the calculations? A. The calculations were all made by Mr. Walton.
  - Q. 75. Is he the gentleman at the table? A. Yes.
- Q. 76. He was your field engineer? A. He gave me these in a memorandum which is in the file,

Vallecito files. The reason I couldn't say 2230 right here clearly in this letter, they are not shown, but in the compilation of them, we would have to use it because you couldn't put it

in here. It is not in the letter; it's a summary here.

Mr. Sweeney: For Your Honor's information, all the detail facts regarding these computations have been presented exhaustively in defendant's proof which were presented in Denver last October through Mr. Walton, the man who made them.

Justice Madden: Would the totals that those detailed compilations bring correspond with what you find in this letter?

Mr. Sweeney: The contracting officer has made an allowance of \$44,000,00. He has increased the sum recommended by Mr. Burns a little bit. Those facts are set out in the petition, Your Honor.

Justice Madden: I don't know. There doesn't seem to be much in this communication that proves much, if there is anything in it, which relates to the rental rates. I suppose it does tend to confirm the witness's present testimony about that.

Mr. Sweeney: This is part of the proof, if Your Honor please, he is showing there were these negotiations touching the efforts of the parties to each an equitable adjustment as to what increase, if any, would be made.

Justice Madden: It may be admitted.

(The document above referred to previously marked Defendant's Exhibit T for identification, is now received in evidence and filed in connection with this case.)

Mr. Sweeney: Thank you.

# 2231 By Mr. Sweeney:

Q. 77. We show you what purports to be a copy of a letter dated October 4, 1941, signed C. A. Burns, to the chief engineer and only so far as it

refers to the last paragraph: "Final calculations show that there is no overhaul involved in any of the borrow pit items." Does that refresh your recollection? A. Yes, this letter is dated October 4, 1941, Vallecito, Colorado, from the construction engineer to the chief engineer, and paragraph 4: "Final calculations show that there is no overhaul involved in any of the borrow pit items."

Justice Madden: What is that for?

Mr. Sweeney: It is offered, if Your Honor please, for showing there was no overhaul involved in connection with claim Item No. 7.

Justice Madden: Does this witness know there wasn't? If he does, why doesn't he testify?

The Witness: I know there was no overhaul involved.

Justice Madden: I don't see much point in the letter. If you want him to testify there was no overhaul, why offer the letter?

Mr. Sweeney: Just mark it for identification; that is all, and have it go along with the record.

(The copy of letter above referred to, marked Defendant's Exhibit No. U for identification only,

# 2245 By Mr. Ruddiman:

XQ. 117. I believe you testified, did you not, that the rates for equipment submitted by the plaintiff on the cobble borrow claim were twice the A.G.C. rates? A. That was in the letter, yes, that I read.

XQ. 118. Was that your testimony at this hearing? A. Approximately; I think it said approximately.

XQ. 119. Do you so testify now that those rates were— A. Whatever is in that letter; that is right.

XQ. 120. The rates submitted by plaintiff were hourly rates, were they not? A. As I recall, they were.

XQ. 121. And isn't it a fact that the A.G.C. has no hourly rental rates?

Mr. Sweeney: Objection, if Your Honor please. We object to this witness being questioned regarding the details of what the A.G.C. rates are. He was called only for the limited purpose of testifying with respect to the two main points involved which related to alleged protests and the other was rental rates. He has told what rental rates he followed. I don't think he should be questioned—

Justice Madden: His recollection may not be very good on it, but I think Mr. Ruddiman is entitled to find out what he does testify to now. He has before him his former letter and if that doesn't

refresh his recollection, he can say so. A. I'd 2246 have to look at the book to see. I don't recall.

It is on the table right here. I really don't recall the facts of it.

Mr. Sweeney: Pardon me. Mr. Burns is asking for a letter.

### By Mr. Sweeney:

Q. 122. Now, what letter is that, Mr. Burns? A. No, I was just asking for that rental rate.

I think this covers your question.

#### By Mr. Ruddiman:

XQ. 123. I was asking about A.G.C. rates. A. I don't know. I really don't know.

XQ. 124. You don't know, then, whether or not the rates submitted by plaintiff were twice the A.G.C. rates? A. I'd have to look at that letter; I was referring to our rates here, is what I think I was referring to. If it is in there, that is all right, but I still say this is based on the A.G.C. and it is approximately the same. I may have had the A.G.C. rental rate at that time, but I don't recall all those details now because I don't have all that information with me. I assume they did. This is just off the record here.

XQ. 125. I wish to call your attention to page 2 of Defendant's Exhibit S where you stated that the equipment rates used by the contractor are about one hundred percent over the proper A.G.C. rates. Is that still your testimony, that the rates submitted by plaintiff were one hundred percent

over the proper A.G.C. rates? A. That is in 2247 the letter, but what I had in mind was, these rates here.

# By Justice Madden:

Q. 126. Referring to A. Referring to this here (indicating).

Q. 127.—to the Bureau of Reclamation rates. A. Yes, because I have always understood and I think it is—these are approximately the rental Associated General Contractors rates. Now, I don't know as I ever checked that to be a hundred percent, but I think that Walton probably has.

Mr. Sweeney: That is in evidence, if Your Honor please, as Plaintiff's Exhibit 17-B.

Justice Madden: The A.G.C. rates?

Mr. Sweeney: The A.G.C. rates are and the Bureau's equipment rental schedule is in evidence as Plaintiff's Exhibit 17-C.

# By Mr. Ruddiman:

XQ. 128. I believe you testified also there was no overhaul for the materials excavated from borrow pit No. 2, is that correct? A. Yes.

XQ. 129. Well, did you mean overhaul for cobble borrow or for earth borrow? A. I think 2248 we have taken the entire borrow pit. As I re-

call, our computations were for the entire area. I don't think there was ever any segregation made. We attempted at one time to designate one, but it was never designated so the whole thing was as one borrow pit. I believe that is correct.

XQ. 130. Well, isn't-

Mr. Sweeney: May the witness be permitted to

conclude his answer? Please don't interrupt him.

A. (Continuing) I was going to say if there is any detail in that other than that being a general borrow pit, you would have to get that from Walton. My recollection is it was just taken as a borrow pit from the dam up to the end.

XQ. 131. Isn't it true that the limit beyond which you had to pay for overhaul for cobble borrow was about half that for the overhaul for earth borrow?

Mr. Sweeney: Just a minute. That involves an interpretation of the contract. A. That would be in the specifications, I believe.

# By Mr. Ruddiman:

XQ. 132. When you testified that there was no overhaul, on which basis are you testifying? A. I am testifying we designated the pit as an earth borrow pit all the way through, through its entirety on the left side of the river. That is what you are interested in now, left side of the river.

2249 XQ. 133. Your statement there was no overhaul would not necessarily stand if that pit was a cobble borrow pit, is that correct? A. If it had been designated cobble borrow pit, that is probably true, although I don't recall just what the overhaul was. I am sure you have it before you. I don't have it. I don't happen to know now.

XQ. 134. You don't know what the distance was? A. I believe it was five thousand feet. I am sure it is all in the specifications which could be read into the record. I don't happen to have it. You could get it before me.

Mr. Sweeney: It's all been read into the record.

A. (Continuing) I haven't gone into this case for a good many years so I am a little bit—

# By Mr. Ruddiman:

XQ. 135. I was asking if you knew what the actual number of overhaul was for borrow pit No. 2? A. I don't recall.

Mr. Sweeney: Paragraph 52, the applicable paragraph of the specifications—

A. (Continuing) I don't recall it now. I'd have to get the records of our computations. I don't recall it now.

#### 2361

#### CLAIM NUMBER 17

#### **Futher Direct Examination**

#### By Mr. Ruddiman:

Q. 1570. Mr. Stewart, did you have to separate all of the material which came out of Borrow Pit Number 2 during the 1940 season? A. Yes.

Q. 1571. And in the fall of 1939? A. Yes.

Q. 1572. Mr. Stewart, if it is necessary to separate materials, is the cost affected by the percentage of cobbles that run in the materials? A. Not appreciably. If it has to go through the plant, that is where the greatest cost is.

Q. 1573. Why did you set up the screening plant in Borrow Pit Number 2? A. To separate 2362 the cobbles from the material that was excavated from Borrow Pit Number 2.

Q. 1574. Was that the most practicable method of doing it? A. It was, for the production that was necessary to get out of that pit that year, yes.

Q. 1575. Why did you have to add a grisly to this plant when you set it up in Borrow Pit Number 2? A. To scalp off the large rocks so they wouldn't go down through the feeding hopper feeders and over the belt and over the separating screen and into the other bins; and they went on over the plant and onto the ground and was picked up at various times with a shovel and loaded, as there was reason for diverting them around the plant itself, or over it. There were so many large ones that it would just knock the plant all to pieces if they went through.

Q. 1576. When you set up the screening plant in Borrow Pit Number 2, did you plan to use both the lima shovel and the lima dragline at all times in Borrow Pit Number 2, during the 1940 season? A. No.

Q. 1577. Why not? A. It was necessary to take the dragline and move it to Borrow Pit number 1, because that was where we got our Number 2 2363 material—the most of the Number 2 material for the embankment. Therefore, at times, we would move it over there to bring that section of the embankment up; and when it was up

with the rest of the sections, or a little above, then we would move it back and work it in Borrow Pit Number 2 until such time as necessary to move it back.

- Q. 1578. Was any complaint ever made that you did not have sufficient excavating equipment in Borrow Pit Number 2 during the 1940 season? A. No.
- Q. 1579. Was all of the embankment that was placed from materials excavated from Borrow Pit Number 2 accepted by the Government? A. Yes, with the exception of the stripping, and that was wasted.
- Q. 1580. Is it or is it not a fact that the material from the second cut of area Number 1 of Borrow Pit Number 2 consisted of materials that were similar in every respect to material from the subpits in Borrow Pit Number 1? A. Read that question.

(Question Number 1580 was read by the reporter as above recorded.)

- . A. No, they were not.
- Q. 1581. What was the difference? A. There was cobble in them. The subpits in Borrow Pit 2364 Number 1 didn't have cobble in them.
- Q. 1582. How about the moisture content? A. There was very little moisture content in Number 2 pit, or in the material of Number 2 pit anywhere.
- Q. 1583. Would it cost from 1 cent to  $1\frac{1}{2}$  cents to remove rocks on the embankment from material excavated from Borrow Pit Number 1? A. No.

Commissioner Evans: Will you clarify that 1 cent or 11/2 cents—for what?

Mr. Ruddiman: A cent or a cent and a half per cubic yard.

Commissioner Evans: All right.

The Witness: We didn't make any provisions on the embankment for moving cobbles from any of the Number 1 borrow. If there was a stone came in a load, it was either removed by the dump man, or sometimes the bulldozer man kicked it off with the bulldozer. We didn't have men or equipment on the embankment for taking stones out of the materials that came from Borrow Pit Number 1.

# By Mr. Ruddiman:

Q. 1584. Was the bulldozer used for any substantial period of time in kicking cobbles that came from Borrow Pit Number 1 over to the cobble section of the fill? A. No.

Q. 1585. After you received Change Order Number 3, did you ever state to anyone connected with the defendant that you expected to submit a claim for adjustment under this

change order, based merely upon the cost of separating the materials in Borrow Pit Number 2?

A. Yes, we did state that.

Q. 1586. Based purely on the cost of separation? A. No, we did not—on the basis of cobble operation from point of excavation to point of disposal. This wasn't only a separation job, but it was a cobble excavation also.

Q. 1587. Would you have been able to pick out the costs of separation alone from your cost records? A. It would have been difficult to pick out everything that would actually come under the separation. The actual plant and the labor that it took to run the plant, yes. But that doesn't cover all separation. You have additional haul to the plant, dump at the plant, hauling away from the plant. You have a break there. And all this hauling and transportation equipment.

Q. 1588. How did the difficulties in excavating compare with the difficulties of excavating in Borrow Pit Number 1? A. There was no comparison there, because in Borrow Pit Number 1 we didn't have any cobbles, and it wasn't cemented material. In Borrow Pit Number 2 we had the cobbles and several places was cemented material, and in instances it was necessary for us to drill it and shoot

it with dynamite in order to excavate it at all.

2366 Q. 1589. Would that affect your costs? A.

Yes.

Q. 1590. In what respect? A. Well, where we shot it there would be that additional; and where we didn't shoot it and it was still hard, the hardness caused a lot of additional cost, wear and tear on shovels and draglines.

Q. 1591. And how would that affect your production, as compared with Borrow Pit Number 1? A. It would slow your production down, away under earth, or straight earth.

Q. 1592. I will show you Defendant's Exhibit Number 17-R, which is a report on excavation work done in the Panama Canal, and ask you if, up to the time of defendant's testimony in this case, you ever saw that report. A. No, I hadn't.

Q. 1593. Is it a fact that Mr. Davis discussed costs with you on this job, and at the end of the month gave you that report, or any other cost report? A. Mr. Davis never gave me any report, or didn't discuss costs with me at all. In fact, the job was going on a good many months before I ever became acquainted with Mr. Davis.

All of this was taken up with our office in Panama, and we had a man there that took care 2367 of it, and I didn't enter into the cost of it at all until our man got it, and occasionally he would tell me the cost. I was interested in it to that extent. But, so far as Mr. Davis ever giving it to me or discussing it with me, he didn't.

- Q. 1594. Is it or is it not a fact that you told Mr. Davis that you thought the costs on that report, or any oher report, reflected the actual cost of the work? A. No, it is not a fact.
- Q. 1595. Was any payment ever made to you upon the basis of the costs shown in Defendant's Exhibit Number 17-R? A. No.
- Q. 1596. Mr. Stewart, you were present at the Panama job, were you not? A. I was the first employee on the Panama job for the Wunderlich-Oaks Construction Company.

Q. 1597. And on that job did you have 14-yard carrimors? A. Yes.

Q. 1598. Now, I will call your attention to Page 17, which lists a total hours of 7800 for the three carrimors during the life of this job, but which shows no minor repairs whatsover.

Mr. Stewart, did you operate these machines for 7800 hours without any minor repairs? A. 2368 No.

Q. 1599. What types of minor repairs did you have on these machines? A. I remember these particular machines—we broke some axles on them. We would have cables, which would be minor repairs, and, working steady all the time, there is quite a lot of that used. You have got your blade bits and cutting edges, your cutting edge corners, bolts, occasional belting, and so forth, that was minor repairs.

Q. 1600. And did you have such items on the

Panama job on the carrimors? A. Why, yes.

Q. 1601. During that job did you have minor, repairs on the two Euclid semi-trailer bottom dump trucks, 18 cubic yard capacity? A. Yes. We had minor repairs on all equipment that we worked.

Q. 1602. Mr. Stewart, on the Vallecito job, when did you perform your overhaul and major repairs? A. In the part of the year that we were not operating on the job.

Q. 1603. And when was that? A. In the winter time, or from the time we shut down in the early

part of the winter to early spring. We shut down during that time due to climatic conditions, and all the equipment that required any overhauling, we

would take it into the shop and tear it down and overhaul it during that time, in order

that it would be in good shape for the working season following the winter, and also to keep our good men—good mechanical forces—employed, so that we would have them for the next season, or the following season, because we thought—in fact, we knew, that by having those same men that were familiar with the equipment that we were working, and had been with it for sometime, we could get by with it a lot better than if we would lay them off and lose part of them the next season.

It is always a lot better to have your old men stay with you that are familiar with such equipment than to take new men on.

Q. 1604. Mr. Stewart, did Defendant's Exhibit 17-R have anything to do with the payments made under the escalator clause on your Panama contract? A. No.

# By Commissioner Evans:

Q. 1605. If you know. Do you know? A. Well, I don't understand the escalator clause too well, or didn't understand the escalator clause too well; but I don't believe it did.

Fuel and gasoline was affected by the escalator clause—that is, the prices. And labor was also.

But, otherwise, there was nothing else in here that I see that was affected by it.

2370 By Mr. Ruddiman:

- Q. 1606. Have you finished your answer? A. Yes.
- Q. 1607. Mr. Stewart, after the Panama job was completed did you repair the equipment? A. Yes; that that needed it, we repaired.
- Q. 1608. Was that an extensive operation? A. No. Our equipment was in pretty good shape and we kept it that way throughout the job; although we had so much of it, it took some time.
- Q. 1609. Mr. Stewart, is there any basis of comparison between a D8/tractor and a 901 dragline, as far as the cost of field repairs is concerned? A. Well, there is no comparison in the machine. Therefore, I don't believe there would be any basis of comparison in the cost between the operation of them, or the maintenance, or anything else. There is no comparison in the operation, in the original cost, or anything pertaining to it. There is no comparison.
- Q. 1610. What kind of maintenance items would you have for the dragline? A. Well, just in operating, the maintenance—or when operating, the maintenance would be cables, bucket repairs, buck-
- et teeth, drag pans. That is for the dragline.

  2371 Q. 1611. What kind of maintenance items
  would you have on the D-8 tractor? A. You

would have the cables and—it all depends upon what attachment was on the tractor, if it was a bulldozer or a scraper. If it would be a bulldozer, you would have you bulldozer blades, corner bits, bolts, cables, sheives, power unit, friction bands, and such things, that might go wrong with it generally.

Q. 1612. These items of cables and bands on the hoist, and cutting edges, which you have just described, are items used in connection with the bull-dozer—is that not correct? A. Well, it is with the bulldozer itself, yes, and the power unit that operates the bulldozer from the tractor.

Q. 1613. In the fall of 1940, after you finished placing the embankment from Borrow Pit Number 2, were there any other operations upon which you used equipment? A. Yes.

Q. 1614. Approximately how long did these go on? A. Well, throughout November.

Q. 1615. Of what year are you speaking? A. 1940.

Q. 1616. Over the life of a piece of equipment, is it unusual for the total cost of field repairs and maintenance to exceed the major overhaul and repairs? A. Under hard conditions, many times it

will exceed it greatly. Minor repairs will

2372 exceed the major greatly.

Q. 1617. And what kind of conditions did you encounter on the Vallecito job? A. Good tough ones. The rock was hard, abrasive; and the sand was the same. The particles were hard; very abrasive material all through. It would cut metals, you know, just as quick as any material that you would find any place, and as fast.

Q. 1618. What was the condition of your equipment at the beginning of the 1940 working season? A. The equipment at the beginning of the 1940 working season was in good shape. We had worked it all over the winter before that.

Q. 1619. Were the Euclid 18-yard trucks the only new Euclid trucks you had on this job? A. No. All of the 12-yard and 15-yard Euclids were new on that job.

Q. 1620. When did you get the 12 and 15-yard Euclids? A. Some of them—the most of them in 1939, and I believe some of them in the fall of 1938.

(Discussion followed off the record.)

(There was a short recess.)

# By Mr. Ruddiman:

Q. 1621. What is the greatest item of maintenance, Mr. Stewart, in connection with a sheepsfoot roller? A. Keeping the feet built up as they 2373 wear off from rolling the material. The material will cut the feet down so that they wear off at the corners, and you have lost your surface. That is the greatest maintenance.

Q. 1622. Does it make any difference whether the roller is new or old as to maintenance cost? A. No.

Q. 1623. What was the character of the material that was coming from Borrow Pit Number 2, over which these rollers operated? A. Well, it was of the

same character that came from the required excavation that was separated. It was abrasive material; sand particles in it; rock; gravel.

Q. 1624. Mr. Stewart, was it your practice on this job, when repair parts were received, to charge them directly to the items of equipment for which they were purchased, regardless of whether they went onto the equipment or remained in stock? A. No, it was not. The parts were not charged to the equipment until the equipment received them, or they were used on the equipment.

Q. 1625. During 1940, what kind of work did you use the 20-yard Euclids for, as compared to the 12-yard Euclids? A. The 20-yard Euclids, in 1940, were used principally to haul the fine material from

the separating plant; where the 12-yard 2374 Euclids hauled all the cobbles from the separating plant, and boulders from the pit, and

such work as that.

Q. 1626. How did the usage of the 20-yard Euclids compare to that of the 12-yard Euclids? A. There wasn't much comparison as far as the types of material they hauled and the abuse they got, because the material—fine material—from the separating plant wouldn't beat up any equipment. The haul was shorter than the hauls in hauling boulders from the pit, and material from the pit to the plant; and also, it wasn't near as hard on the 20-yard Euclids hauling the finer material as on the 12-yard Euclids hauling the cobbles from the plant and boulders from over the plant. That was all done by

the 12-yard Euclids. It was much harder work than the 20-yard Euclids had.

Q. 1627. What was the length of the haul from the separating plant to the embankment, as compared to the length of the haul from the borrow pit to the separating plant? A. Well, the haul from the borrow pit to the separating plant varied, where the haul from the separating plant to the embankment was constant; and the haul from the farther part of the borrow pit to the plant was considerably long than from the plant to the embankment.

Q. 1628. Which had the most difficult haul—the 20-yard Euclids or the 12-yard Euclids? A. 2375 The 12-yard Euclids.

Q. 1629. How did the difference in usage of the 20-yard Euclids as compared to the 12-yard Euclids affect the cost in maintenance for each? A. Well, any machine, regardless of whether it is a 12 or a 20-yard Euclids, if it is a similar type of machine that has harder usage, the maintenance cost on them naturally would be greater than it would on one that wouldn't work as hard, or didn't have as hard work.

Q. 1630. Were the conditions under which equipment operated in Panama at all comparable to the conditions under which equipment operated at the Vallecit project? A. No.

Q. 1631. Why not? A. In the Vallecito project it was well over 7500 feet elevation and had a great variation in temperatures and had tougher, harder materials, abrasive materials; where, in Panama,

we were at sea level and, in fact, considerable of our work was below sea level. Materials were not abrasive. It had a nearly constant temperature. We didn't vary 20 degrees the year round.

Q. 1632. What effect does the variation in temperature have on cost of maintenance? A. Well, it has a great effect on metals. Therefore, it would

affect maintenance. And then, also, the eleva-2376 tion has a great lot to do with the strain that

is put on motors. After all, a motor is designed, and its horsepower, at sea level. And you take a machine with a certain horsepower motor in it and take it to a high elevation—you are naturally putting a strain on it to perform its work.

Q. 1633. Do you mean that motors do not develop as much horsepower at the higher elevations as they do at the sea level? A. That is what I mean.

Q. 1634. And how does that affect the cost of maintenance? A. Well, when they don't develop their horsepower that they are designed for at sea level—you take them to where you don't get the horsepower out of them to carry their capacity, you are straining your motor; also straining your equipment. You get more jerks and such as that; where at sea level you won't have that condition.

Q. 1635. Well, if you were using an engine at 7500 feet, would that engine have to perform more revolutions to accomplish the same horsepower that it would at a lower elevation? A. Well, they are not designed to change the revolutions. You lose your horsepower.

Q. 1636. You lose your horsepower? A. Yes; you lose your horsepower.

# By Commissioner Evans:

Q. 1637. How far above sea level do you have to go before that loss becomes noticeable? A. 2377 Something over 3,000 feet.

I think up there our horsepower was decreased 12 or 13 per cent.

# By Mr. Ruddiman:

Q. 1638. Do you know what the temperature differentials were at Vallecito between day and night, as compared to those on the Panama job? A. During the working season at Vallecito, I couldn't tell you, but during the season I can tell you pretty close. That is, day and night, I couldn't tell you.

In Panama there wasn't four degrees—two to four degrees between day and night. The variation was from season to season—the maximum variation.

Q. 1639. Well, were the variations in temperature at Vallecito greater than they were at Panama? A. Seasonal, yes; and day and night, yes. Their seasonal variation there would be as high as 100 degrees.

Q. 1640. Is it or is it not a fact that minor repair do not vary a great deal from job to job? A. Yes, they do, depending upon the type of work you have and the material that you are handling.

Q. 1641. You mean they do vary a great deal? A.

They do vary a great deal, all depending upon the type of material you have and the conditions under which you are working.

2378 Q. 1642. I will show you Page 14 of Defendant's Exhibit Number 17-R, which lists an average hourly cost of 4-7/10 cents for minor repairs and miscellaneous expense per operating hour for a Loraine shovel dragline combination, three-quarter cubic yard capacity.

I want to ask you if the cost of maintenance of that piece of equipment is anything like 4-7/10 cents an hour, or was anything like 4-7/10 cents an hour on the Paṇama job.

Mr. Sweeney: Objected to, if your Honor please. The books would be the best evidence, if they are challenging the data set out in this exhibit.

Commissioner Evans: Objection sustained.

# By Mr. Ruddiman:

Q. 1643. How often do you have to change a cable in connection with the operation of that piece of equipment? A. On this particular machine, in Panama, worked one shift—working one shift, three to four times a month it would be necessary to change a drag cable. The dump cable on the bucket is usually changed oftener. But the drag cable itself, three to four times a month, working one shift, is close to average of the times you would have to change that.

Q. 1644. Is that a minor repair? A. Yes.

- Q. 1645. How much would a drag cable cost for that machine? A. About \$10.
- 2379. Q. 1646. And was that just the cost of the cable itself? A. Yes. That is what we paid for it, not including freight.
- Q. 1647. And what other items of expense would you have in installing the cable? A. You would have your freight and storage and handling, transporting it to the location at which the machine was operating, installing it when it was necessary to, or when the one on the machine broke—other than the \$10 for the cable.
- Q. 1648. Would those other items be more or less than the cost of the cable itself?

Mr. Sweeney: Objected to, unless this witness has personal knowledge of the factors. We understand that he was the outside man, supervising the work. We imagine the contractor employed office men whose job it was to keep track of these things.

Commissioner Evans: I do not think you have laid the foundation as to his knowledge.

# By Mr. Ruddiman:

- •Q. 1649. What was your position on the Panama job? A. Superintendent of the Panama job.
- Q. 1650. In that connection, did you from time to time make any check of costs on this job? A. I am quite familiar with what it requires to handle the average maintenance work and the labor it

takes.

2380 As to determining the parts, that can't be determined on all maintenance work until such time as the machines are opened, if it is necessary to do that. But, such as this cable, I know it take transportation to get it to the machine from the warehouse. I know it takes warehouse facilities. I know it takes freight to get it to you. And I know it takes labor to get it on the machine after it is transported out there. And I know that costs something.

. By Mr. Sweeney:

Q. 1651. Where did the cable come from? A. The cables down there came from the United States.

By Commissioner Evans:

Q. 1652. Did you keep yourself informed about the costs of the various items of parts? A. No. At times I would check such things as that—not pick out particular machines and check the actual cost on them, no. But, in installing a cable on a three-quarter yard dragline, I do know that there are additional costs other than the cost or purchase price of the cable.

Commissioner Evans: All right. Next question.

By Mr. Ruddiman:

Q. 1653. Do you know what you were paying your labor for making such installations of cable? A. Yes.

Q. 1654. How much were you paying per 2381 hour? A. Mechanics were getting \$1.50 an hour; and the operator always helps install his own cable, and he was getting \$2 an hour.

Q. 1655. How long would it take the mechanic and the operator to install this cable? A. On that particular machine, ten to fifteen minutes.

Q. 1656. Did you have other items of maintenance besides changing the drag cable on this particular piece of equipment? A. Yes.

Q. 1657. What was the period of time over which you used your equipment on the Panama job? A. About 27 months.

Q. 1658. Did you have a two and a half ton repair truck on this Vallecito job? A. I don't know if it was a two and a half ton. I know we had several repair trucks, we called "service trucks."

Q. 1659. You had more than one? A. Yes. We had several pick-ups, and we had one truck that was heavier, but I don't believe it was a two and a half ton.

Q.1660. Did that heavier truck take care of all the minor repairs on this job? A. No.

Q. 1661. Did it take care of most of them? 2382 A. It took care of what it could take care of.

If there was more than it could take care of, there was others brought out from the shop.

Q. 1662. Other mechanics? A. Other mechanics and their transportation also.

Q. 1663. Were pieces of equipment taken to the shop for minor repairs? A. If it needed minor re-

pairs and was of a type that it could get there by itself, that was where the minor repairs was made. If a machine was broke down to where it couldn't get to the shop, then it was done in the field.

Q. 1664. Did you have a tire truck? A. We had a tire man and a truck available to him whenever there was tire repairs to make in the field.

Q. 1665. How did you take care of the minor repairs on the shovel? A. We had a shovel mechanic and he had a transportation truck all the time, that he had all the time. Nobody else ever had it. He had an acetylene outfit on there, and all tools for the shove!; had cables. He took care of all of that—asmuch of it during the noon hour as he could get at at that time.

Q. 1666. Did he have mechanics that helped him?

A. When his work necessitated help.

Q. 1667. When were bids opened on the Panama job? A. December 4th or 7th, of 1940.

2383 Q. 1668. And prior to that time were you overhauling equipment in preparation for the Panama job! A. No. I never heard of the Panama job until after Wunderlich-Oaks had bid it.

Q. 1669. Were you doing major overhauling and repairs during November of 1940? A. No.

Q. 1670. Did you ever rent a grader to the Bureau of Reclamation for \$1.25 an/hour? A. Yes.

Q. 1671. What kind of grader was this? A. It was an old pull blade—one that you pull. The make was Caterpiller.

Q. 1672. Was it self-propelled? A. No. It was necessary to pull it with a tractor, or some other machine.

Q. 1673. It had to be towed— A. (interposing) It had to be towed.

Q-1673. (resumed) -by another piece of equip-

ment? A. That is right.

Q. 1674. Is that piece of equipment at all comparable to a power controlled Caterpiller grader?

May I withdraw that question?

Q. 1675. Is this towed grader at all comparable to a motor patrol grader? A. No.

Q. 1676. Do you have any idea what the difference would be in the purchase price?

A. Oh, yes. The pull blades, or towed graders—the price of them is approximately \$2,000; where the motor patrol, or auto patrol, is around \$7,000; and now, at this time, about \$7,700.

# By Commissioner Evans:

Q. 1677. Does that auto patrol have the push blade? A. No. It is self-propelled and the blade is underneath it, and it is all power controlled in the machine by the operator. It propels itself. Commissioner Evans: I see.

# By Mr. Ruddiman:

Q. 1678. What did the rental of \$1.25 per hour cover in the case of the towed grader? A. Just the grader—the machine; nothing else.

Q. 1679. The bare rental? A. Yes; nothing else.

Q. 1680. Did it cover anything for the operator?

A. No.

Q. 1681. Or for maintenance? A. No. Mr. Ruddiman: That is all.

2385 (Discussion followed off the record.)

#### Cross Examination .

#### By Mr. Sweeney:

XQ. 1682. With regard to the last questions that Mr. Ruddiman asked you, we show you Defendant's Exhibit Number 17-F. Refer, please, to the item, "Grader Caterpiller, Power Control," and to the column, "Martin Wunderlich, Total Hourly Rate, \$4,54."

Tell his Honor, please, if it is not a fact that that is the equipment that you charged the defendant for at this rate. A. It is not a fact, because the machine the Bureau of Reclamation rented from us at \$1.25 never was in Panama, and we didn't have any type of grader in Panama, other than autopatrol graders, and we had six of them.

XQ. 1683. Mr. Stewart, please, we are not asking you whether you had this machine in Panama or not. The record only indicates that it was used on the Vallecito job; no indication that it was used on the Panama job.

Do you know there were no comparable figures/regarding the Panama job?

Confine your answer, please, to whether or not that is the equipment that you are charging the defendant for on the Vallecito job at an hourly rate of \$5.54? A. Where is this from?

XQ. 1684. These are from your figures.

2386 A. Where at ?

"Martin Wunderlich, Total Hourly Rate, \$5.54."

A. Well, I don't know about this, but I do know that they used the Caterpillar towed grader and paid \$1.25 an hour for it, and there was no comparison between the Caterpillar towed grader and an auto patrol.

XQ. 1686. I am asking you if it is not a fact that in this case the plaintiff is charging the Government \$5.54 an hour for the alleged rental of that grader—Caterpillar power control? A. I can't see that this is the towed grader that they used, listed—

XQ. 1687. (interposing) To your knowledge, is Martin Wunderlich charging the defendant for any other power control Caterpillar grader at \$5.54 an hour? A. If there is that piece of equipment there, that may be it. I can't tell you offhand what it is charging for the auto patrol.

XQ. 1688. Just assume that this is Martin Wunderlich's piece of equipment and he is asking a rental of \$5.54 an hour for it. Tell his Lonor, please, if it is not a fact that the language there, "power control," relates to the operation of the grader itself. It has nothing to do with "i.e towing

of it? A. It doesn't say "towed grader," and 2387 the rate is comparable to an auto patrol rate.

XQ. 1689. Now, tell his Honor, please, if

it is not a fact that Grader Caterpillar Power Control is a towed grader. A. No, I won't tell him that is a fact, because I don't know—not from that paper, I don't know—or from that exhibit.

XQ. 1690. Mr. Stewart, please, we show you. Plaintiff's Exhibit 17-E. Now, we call your attention to the third item on Page 2, which is captioned, "Power control Caterpillar Grader," the total hourly rate is \$5.54. Now, please, referring to Plaintiff's Exhibit 17-F, tell his Honor, please, if that refreshes your recollection that the Grader Caterpillar Power Control at \$5.54 an hour is the same item of equipment that is shown on Plaintiff's Exhibit 17-E, Page 2, Item Number 2. A. I would take it to be, according to the description here.

XQ. 1691. All right. Taking Plaintiff's Exhibit, please, is there anything to show that the power control Caterpillar grader, in connection with which the hourly rate is noted at \$5.54, is a towed grader? A. No—nor anything describing it as an auto patrol grader. It doesn't describe either of them.

XQ. 1692. Is it not a fact that auto patrol graders are listed on Plaintiff's Exhibit 17-E, and that

you had two of them on the job? A. Auto 2388 Patrol Grader—right there (indicating).

XQ. 1693. And that the rental rate is \$2.59? A. That is what it states here.

XQ. 1694. That has nothing to do with Grader Caterpillar Power Patrol, for which the plaintiff is asking \$5.54 an hour? A. Well, I don't know what method was used in arriving at this.

XQ. 1695. Now, tell his Honor, please, if it is not a fact that you do know, as a fact, that Mr. Wunderlich charged the defendant \$1.25 an hour for that same item of equipment, namely Grader Caterpillar Power Control, that he is now asking \$5.54 an hour? A. No, I don't know that to be a fact.

XQ. 1696. Now, tell his Honor, please, how many auto patrols—that is, items of equipment operated by their own power—did you have on the job? A. Auto patrols?

XQ. 1697. Yes, at Vallecito. A. Two.

XQ. 1698. Two. Now, tell his Honor, please, how many towed graders you had. A. One.

XQ. 1699. Now, has your recoilection 2389 been refreshed that Grader Caterpillar

Power Patrol, at \$5.54 is the only single item of equipment that the Wunderlich Company had on this Vallecito job, of that kind? A. Repeat the question.

(Question Number 1699 was read by the reporter as above recorded.)

A. We only had one towed grader on the job. Whether this refers to the towed grader or not I cannot tell you. I do not know.

XQ. 1700. You told his Honor that you separated all the material from Borrow Pit Number 2 in the fall of 1939 and 1940. Tell his Honor, please, was that done with the separating plant, or did

you do it with the rakedozer? A. It was done by both methods.

XQ. 1701. Now, tell his Honor, please, if it is not a fact that a large part of that material, say, was separated on the embankment with the rakedozer.

A. Which material are you referring to?

XQ. 1702. Material that you excavated in the fail of 1939 and 1940 from Borrow Pit Number 2.

A. That that was separated in 1939—the large part of it was done with rakedozers; but in 1940, no.

XQ. 1703. Now, tell his Honor, please, if it is not a fact that the screening plant was not placed in effective operation until about June 21, 1940.

2390 A. It was sometime in June.

XQ. 1704. And before that time you used the rakedozer's to separate the materials? A. Yes.

XQ. 1705. Now, Mr. Stewart, did we understand you correctly to say that the cost of screening the material from Pit Number 2 was not appreciably increased—that is, the cost of separating them was not materially increased by using this separating plant? A. No, you didn't understand me to say that, I believe. I don't understand what you are asking me, though.

XQ. 1706. Well, did you tell the Court that the cost of separating the materials was not appreciably increased unless you used the separating plant? A. No, I didn't tell him that.

XQ. 1707. You did not tell him that? A. No. ...

XQ. 1708. The cost would be increased, would it not, using the separating plant? A. Over what?

XQ. 1709. Over any other method that you used in doing it, in separating the cobbles. A. No, not necessarily. The reason for using the separating plant in preference to the rakedozers was because a rakedozer would not take care of the production required to do the embankment in 1940.

2391 XQ. 1710. That was not an effective way of separating the larger cobbles from the material? A. The what?

XQ. 1711. The rakedozer. A. It was not a productive way. You could not get the production to finish the embankment in 1940. Otherwise, it had been satisfactory, or I imagine we wouldn't have been permitted to do it in that manner.

XQ. 1712. Now, tell his Honor, please, if it is not a fact that the work was done satisfactorily using the rakedozer, and that you did encounter considerable difficulty in doing it that way? A. Although we did encounter difficulty, we were not stopped because it was unsatisfactory, nor was there any argument over it not being satisfactory.

XQ. 1713. Did you not have some difficulty, say, particularly in the spring of 1940, in preparing your screening plant to operate efficiently? A. We moved to the location at Pit Number 2 from where is was originally installed, and redesigned it.

XQ. 1714. You practically rebuilt it, installed additional motors? A. We eliminated a lot of it—a lot of the plant as it was set up in its original location, and we added other parts to it.

2392 XQ. 1715. In other words, it was not originally designed to eliminate plus 5 cob-

bles? A. It was not designed to fit the condition that existed at Borrow Pit 2.

XQ. 1716. And you did not purchase it for that purpose, did you? A. We purchased it to do the separation of the required excavation in the cobble borrow pits.

XQ. 1717. You have said, "the required excavation in the cobble borrow pits." Is there not a distinction between required excavation and also the cobble borrow pit? A. The cobble borrow pit that was original laid out on the plans—the only distinction there that I could see would be that one was required for a structure and the other was required to obtain materials.

XQ. 1718. You have referred to this cobble borrow pit, as shown on the plans. The specifications and the wait prices that are set up in them indicate that you were to excavate 50,000 cubic yards from that particular borrow pit, and the rate for that was 35 cents, was it not? A. Yes.

XQ. 1719. Now, the difference between the cost of excavated earth materials, which was 23 cents, and the cost of excavated cobble materials, was 35

cents, or a difference of 12 cents? A. Yes. 2393 XQ. 1720. Now, if you had gone to the cobble borrow pit and excavated cobbles, 50,000 cubic yards, the quantity indicated, and had you been paid a difference of 12 cents, you would have been paid only \$6,000 more for that? A. Fifty thousand yards wasn't the amount required to

complete the cobble section. Therefore, there would have had to have been some extension of the pits to get the amount required.

XQ. 1721. You would have had to go back in Pit 2, or somewhere else to get cobbles? A. The cobble borrow pit required to get the material.

XQ. 1722. Confine your answer to the quantity of cobbles indicated in the contract as possibly coming from the cobble borrow pit, which was 50,000 cubic yards. Now, if you had excavated that 50,000 cubic yards, you would have been paid only \$6,000 additional—is that not so? A. Yes. But 50,000 cubic yards would have been sufficient if there would have been sufficient cobbles in the required excavation, or as it was set out in the contract. If there had been that amount in the required excavation, 50,000 cubic yards would have been sufficient to finish the cobble fill.

XQ. 1723. You did not encounter as much cobble in the required excavation as originally anticipated? A. That is right.

2394 XQ. 1724. You had two amounts set up—80,000 and 275,000 cubic yards of cobble, or 355,000 cubic yards. Do you recollect that you actually excavated about 231,000 cubic yards of cobbles—331,000 cubic yards? A. When the required excavation was done and the cobbles were separated from it, we were approximately 90 to 100,000 yards short of cobbles.

XQ. 1725. But is it not a fact that you excavated altogether, from all possible sources—required ex-

cavation and borrow pits — about 331,000 cubic yards of cobbles, from all sources? A. I can tell you if I refer to the estimates, which is an exhibit.

Mr. Sweeney: Yes.

Commissioner Evans: Do you want him to take time to look it up?

Mr. Sweeney: It is not necessary.

Commissioner Evans: We will recess until 9:30 in the morning.

(Whereupon, at 5:00 o'clock p.m., a recess was taken to 9:30 o'clock a.m., Tuesday, June 3, 2395 1947.)

## IN THE

## UNITED STATES COURT OF CLAIMS

Martin Wunderlich, Ann M. Wunderlich, Marie Wunderlich, E. Murielle Wunderlich, and

Theodore Wunderlich,
a Partnership, Trading under the Name of MARTIN WUNDERLICH COMPANY,

VS.

THE UNITED STATES

No. 46307

Washington, D. C., June 3, 1947,

Tuesday, at 9:30 o'clock a.m.

## TESTIMONY FOR PLAINTIFF

The hearing was resumed, pursuant to the recess previously noted.

\*Present: (The same appearances as previously noted.)

B. H. Stewart, resumed the stand for further

Cross Examination

By Mr. Sweeney:

\*XQ. 1726. Mr. Stewart, please, will you refer to the petition, Page 46, a copy of which is in front of you? Note, please, items 20 and 21 thereon, relating to the placing of cobble—80,000 cubic yards and 275,000 cubic yards, a total of 355,000 cubic yards.

Now, tell his Honor, please, if it is not a fact that you would have obtained that cobble from the required structural excavation and also from 2396 the borrow pits, with the exception of the 50,000 cubic yards of cobble under Item 16. A. We would have, if the excavation had contained it.

XQ. 1727. Yes. That was where it was to come from. A. Yes.

XQ. 1728. With the exception of the 50,000 cubic yards. A. That was where it was to come from.

XQ. 1729. Now, tell his Honor, please, if it is not a fact that Item 16, the 50,000 cubic yards, was set up as a deficiency item in the event that the required structural excavation did not produce that amount of cobble. A. The required structural excavation would have produced 275 and 80.

XQ. 1730. Yes. A. And then 50,000 cubic yards is all that would have had to come from the cobble pit.

XQ. 1731. Now, the record shows that your company was paid for a total, for placing 331,000 cubic yards of cobble. That was less than the amount that was estimated in the schedule by about 34,000, was it not? A. If that was what we were paid for, it was.

Mr. Sweeney: That was what you were paid for. XQ. 1732. Now, tell his Honor, please, if it is not a fact that had you gone into this cobble pit 2397 to obtain this 50,000 cubic yards that is indicated in Item 16, that you would have had to go through the same process of operation in that pit as you did in Borrow Pits Numbers 1 and 2. A. No, that is not a fact.

XQ. 1733. What is the fact? A. We would have had to separate that, but 50,000 yards would not have been enough.

XQ. 1734. But, with regard to going into this cobble pit, you would have had to separate it, would you not, in the usual way? A. Yes; it was cobble.

XQ. 1735, Will you estimate about how much material you would have had to separate in order to obtain 50,000 cubic yards of cobble? A. The cobble quantity, according to Item 16 here, would have been 50,000 cubic yards.

XQ: 1736. About how much material would you have had to separate to obtain that cobble? A. I couldn't say that, because we didn't do it.

XQ. 1737. But, on the basis of your experience as superintendent for the plaintiff in this case, is it not a fact that you would have had to excavate about 350,000-would you not have to excavate a very large amount, possibly 350,000 cubic yards? A. I wouldn't say that to be a fact.

XQ. 1738. Well, assuming that you would have obtained—just a hypothetical question -about 30 per cent of cobbles from that material,

you would have had to excavate on that basis about 150,000. A. If 30 per cent is correct. I do not know

that.

2398

J XQ. 1739. And tell his Honor, please, if it is not a fact that, in doing that, you would have had to move and set up the separating plant in that particular pit? A. The separating plant where it was originally erected was not far from that pit.

XQ. 1740. Well, you would have removed it, though, would you not? A. We didn't intend to. XQ. 1741. You didn't intend to? A. Not for that

pit.

XQ. 1742. If you did not do that, you would have had to carry the materials, would you not, from the source of production to the separating plant? A. Naturally.

XQ. 1743. And that would have cost you considerably, would it not? A. It was a very little farther distance than the lower end of the spillway, which the materials from the lower end of the spillway went to the same separating plant where it was originally set up, and the distance

from the cobble borrow pit was right across 2399 the river from the downstream end of the

spillway, or very little farther from the excavation of the downstream end of the spillway, and all of that material was hauled to the screening plant where it was originally erected.

Therefore, we would not have moved the screening plant from the place it was originally erected and set up over to the cobble borrow pit. We would have moved the material from the cobble borrow pit to the screening plant.

XQ. 1744. If you did not intend to move the screening plant, you would have had to use your trucks to move it. A. We didn't intend to move it, and we would have had to use trucks regardless.

XQ. 1745. That would have involved considerable wear and tear on your equipment, handling those heavy cobbles. A. We anticipated such wear and tear.

XQ. 1746. You have already testified with respect to Item 16.

Had you gone into that pit and excavated the material there would have been a difference of 12 cents a cubic yard, or a total of \$6,000. If you had gone into the— A. (interposing) I did not testify to any \$6,000.

XQ. 1747. That is a plain mathematical proposition. The difference between 23 cents and 35 cents is 12 cents, I believe. A. Depending on the quantities you use.

XQ. 1748. Excavating in the borrow pit area, you were paid 23 cents for that earth bor-2400 row. A. In the earth borrow pit.

XQ. 1749. Under Item 16 you were to be paid 35 cents. A. Yes.

XQ. 1750. And the difference is 12 cents. A. Yes. XQ. 1751. All right.

Now, had you gone into the borrow pit that is set up in the drawing and removed this 50,000 cubic yards, you would have been paid the difference between the 23 cents and the 35 cents, or 12 cents. A. For the 50,000.

XQ. 1752. For the 50,000, yes. A. Yes.

XQ. 1753. And that would have been 12 cents times the 50,000, or \$6,000. A. Six thousand dollars would be correct for 50,000 yards.

XQ. 1754. Now, the contracting officer, in making his equitable adjustment with regard to Claim Number 17, allowed your company \$44,000 for that, did he not? A. No, not for that. There was no adjustment made for Item 16 at all.

a total of \$44,000. A. I can't say that is the 2401 figure.

XQ. 1756. Your petition says that. A. it is in the record.

XQ. 1757. Yes. And you did not remove any cobble, did you, from the cobble pit? A. Not when I was on the job.

XQ. 1758. You were the superintendent, were you not? A. I was there until the first two weeks of January, 1941.

XQ. 1759. Now, with respect to the separating plant, tell his Honor, please, if it is not a fact that you had used it for the first two seasons—1938 and 1939? A. Repeat that.

(Question Number 1759 was read by the reporter, as above recorded.)

As Yes, we had operated it in 1938 and 1939.

XQ. 1760. And you used it in separating the cobbles from the required structural excavation?

A. Yes.

XQ. 1761. That required structural excavation that relates to the outlet works, the spillway, the diversion channel and the cut-off trench? A. Y.es.

XQ. 1762. And you were required to remove the plus 2½ cobbles from that? A. Yes.

2402 XQ. 1763. Now, when you removed your separating plant in 1940 into Borrow Pit Number 2, you elected to do that yourself, did you not? A. Move to Borrow Pit Number 2?

XQ. 1764. Yes, over to Borrow Pit Number 2, in 1940. A. We were required to separate the material from Borrow Pit Number 2, which was cobble.

XQ. 1765. That was not my question. A. We elected to use the screening plant in preference to attempting to do it all with rakedozers, because they would not handle the quantity of material that was necessary to take from that cobble pit in the year 1940, and the screening plant could separate it a lot faster and get the production.

XQ. 1766. First, you elected to move the screening plant yourself? A. It was necessary to move to that location.

XQ. 1767. You elected to do it? You were not told to? A. No, we weren't told to move it.

XQ. 1768. It was your job to, say, remove the plus 5 cobbles from the fine materials that were placed in the fill? A. We were required to separate the cobble from the other material, yes.

XQ. 1769. Now, when you elected to move 2403 the separating plant into Borrow Pit Number 2, I believe you testified then that you remodeled it in order to do the work more efficiently. A.We redesigned it in order to fit the conditions at the location where we set it up and to operate more efficiently.

XQ. 1770. You shortened the conveyor belt—that was one thing, was it not? A. That was necessary, due to the redesigning.

XQ. 1771. Yes. Before that, in 1938 and 1939, you had a conveyor belt that was quite long? A. It was long.

XQ. 1772. And you had difficulty in separating the materials? A. We had some difficulty, yes.

XQ. 1773. You also increased the power of the separating plant in 1940, did you not? A. No, we didn't. We had less power on it in 1940 than prior to that time, but we had more units of power.

XQ. 1774. That was what I meant. A. But less total power.

XQ. 1775. But you had more units of power? That is, you installed some additional motors? A. We eliminated the large Diesel engine on it, and electrified it, with the exception of the shaker screen that was driven by a small gas engine. And

the rest of the plant was operated by elec-2404 tric power, and it was necessary over there to put in a smaller stationary plant, as in the original location the electric equipment on the plant got its power, or go its electrical current, from the large power plant on the job. XQ. 1776. That was a Kohler system, was it? A. No.

XQ. 1777. You also installed a five-inch grisly scalper, did you not? A. No. The same scalper unit in 1940 was on the plant as was on it prior to that time.

XQ. 1778. The spacing of the bars was changed to eliminate this plus 5 cobble? A. That is not the only unitate was installed in the plant to eliminate plus 5. There was other units in the plant to eliminate plus 5.

XQ. 1779. It now appears that you made considerable, say, improvements to this design, to this plant. You practically rebuilt it, did you not? A. We redesigned it and built it according to the redesign, but we eliminated and did away with and didn't use considerable of the plant that was set up originally, but added to the one we set up in 1940—added to it many other things.

XQ. 1780. Well, the simple proposition, Mr. Stewart, is that the plant as originally built 2405 was not intended to eliminate 5-plus cobbles, was it? A. That is not a fact, that isn't so.

XQ. 1781. All of the cobbles that you were paid for and that you placed on the dam embankment and at the toe of it, they all came from the borrow pits and from the required structural excavation, did they not? A. No, it didn't all come from the borrow pits and the structural excavation. XQ. 1782. From where did it come? A. From Borrow Pit 2.

XQ. 1783. I said the cobble borrow pits. I am referring to the two of them—two, as shown on the drawing. A. Yes.

XQ. 1784. One on the right and one on the left side of the river. A. That wasn't what you asked me, as I understood it.

XQ. 1785. I am now speaking of the embankment earth borrow pits on the left and on the right hand side of the river. A. What are you asking about?

XQ. 1786. That was the source of your cobbles, was it not? A. No.

XQ. 1787. Earth embankment pits, plus required structural excavation? A. What didn't come 2406 from the structural excavation came from the Borrow Pit Number 2.

XQ. 1788. That was the source of it.

You did obtain some cobbles, though, from Pit Number 1, did you not?

A. A few boulders, as they were set aside with the shovel in the excavation and later hauled to the fill; but it was very few.

XQ. 1789. The point is that in obtaining those cobbles, you had to excavate earth and then separate the cobbles from it, did you not? A. I couldn't say which was separated from which. The cobble was separated from the earth. It was a separation.

XQ. 1790. It was a separation job—a dam building job? A. Yes, it was a separation job.

XQ. 1791. As distinguished from a road building job. A. Yes.

XQ. 1792. You would have had to separate that in any event, would you not? A. The cobble, in any event.

XQ. 1793. You would have had to separate that, would you not? A. The cobble material, yes.

XQ. 1794. When you were excavating materials you would have had to separate the cobbles before

making the fill, would you not? A. That was 2407 required...

XQ. 1795. By the contract? A. Yes.

XQ. 1796. In any event, you had to do that? A. Separate the cobbles?

XQ. 1797. Yes. A. Yes.

XQ. 1798. At one point you testified about drilling and using dynamite in particular in a part of Pit Number 2. A. Yes, we did.

XQ. 1799. Did you have very much dynamiting and drilling in there? A. We didn't drill it all.

XQ. 1800. Tell his Honor, did you drill any more than one day, to the best of your recollection? A. We had the machines in there and the drills in there more than one day.

XQ. 1801. More than one day? A. Yes.

XQ. 1802. You do not know how much more, do you? A. I can't tell you how many days.

XQ,1803. Well, as a fact, you did a comparatively small amount of drilling, did yournot, in comparison with the total quantity of earth that was removed? A. Compared with the total amount, 2408 yes.

XQ. 1804. Yes. It was very small.

Now, in regard to this Panama report that is in evidence as Defendant's Exhibit Number 17-R, you were present in Denver at the time Mr. Davis testified at this recent hearing, last November? A. I wasn't at the hearing at the time Mr. Davis testified. What Mr. Davis?

XQ. 1805. Mr. Davis—Bruce Davis, from Panama. A. I wasn't at the hearing that day.

XQ. 1806. You were not at the hearing that day? A. No. There was three days of that hearing I wasn't there.

XQ. 1807. You were not there on the day Mr. Davis testified? A. No, I wasn't; on the part of the day he testified I wasn't there. There were some times that I left at noon and didn't come back.

XQ. 1808. You were the superintendent for the Wunderlich-Oaks partnership on this Panama job? A. Yes.

XQ. 1809. You were the first man, you said, that arrived on the job for the partnership? A. Yes.

XQ. 1810. Other than yourself, did the partnership have anyone else representing it on the 2409 job that Mr. Davis would have contacted each month in connection with this cost report? A. Charles Paulda was there.

XQ. 1811. What did he do? A. He was down there part of the first year, 1941.

XQ. 1812. What did he do, please? A. He was a representative of the Wunderlich-Oaks Company.

XQ. 1813. Do you know what he did? A. 1 couldn't tell you what he did.

XQ. 1814. Tell his Honor, please if it is not a fact that maintenance costs and minor repairs mean substantially the same thing. A. Maintenance?

XQ. 1815. Yes, maintenance and minor repairs.

A. I don't know how they are generally defined, but, myself, to maintain a piece of equipment is to put the minor things on it, the minor repairs necessary to maintain it in operation.

XQ. 1816. You have got to keep a piece of equipment in good condition in order that it can operate continuously and efficiently. A. I have always made it a practice to do so, yes.

XQ. 1817. Are you familiar with the AGC Schedule? A. Just partially.

2410 XQ. 1618. Just partially? A. Yes.

XQ. 1819. In the performance of your duties in supervising the construction of a dam such as this, you are out in the field and you ordinarily would not be concerned with disputes regarding the cost, would you? A. Very much interested, but I do not pick up the information to compile that.

XQ. 1820. It would not be your job to do that? Somebody else would do that? A. Yes.

XQ. 1821. In this case Mr. Wunderlich would have a very able mathematician representing him,

for instance, Mr. Leonard, to do work like that? A. He had several of them, I think, who were qualified for doing that work.

XQ. 1822. In any event, that would not be your special job, would it? A. No; but on the job it was under my supervision.

XQ. 1823. That is, the performance of the work was? A. Yes.

XQ. 1824. Generally, do you know what the AGC Schedule includes under the heading of "Major Repairs"? A. I can't quote it, but I can pick it out of the book.

2411 XQ. 1825. Well, depending upon the kind of equipment, they allow a certain percentage factor each year— A. (interposing) Yes; so I understand.

XQ. 1825. (resumed) —for major repairs? A. Now, generally. I am not too well informed on this. I said a moment ago, partially.

XQ. 1826. Tell his Honor, please, if it is not a fact, speaking generally, if a machine is down for one shift—that is, that it is unable to eperate because of some breakdown, or something, or need for repairs—that that is classified as a minor repair? A. Yes.

XQ. 1827. And tell his Honor, please, if it is not a fact that, speaking generally, if a particular item of equipment is out of operation for more than one shift, that is generally classified as a major repair? At I wouldn't say it was, either; depending upon

the part that went into it, whether it was major or minor, and its availability at the time the machine broke down.

XQ. 1828. I am speaking of the general practice, in order to make a line of demarcation and distinction between the two. A. It cannot be definitely divided.

XQ. 1829. You are now speaking about the major repairs and the minor? A. No—the manner in which it is done, and the time it takes.

practical men—I am referring now to construction contractors such as you represented—that as a general rule they recognize that if a machine is out of operation for more than one shift that it is considered to be a major repair? A. No. It all depends upon the work it takes to put it back into repair. Sometimes it wouldn't take \$4 worth of repairs and the same amount of labor, and it would take four days, and that would be a minor repair; and the time of the equipment being down is the greatest one, although the repair would be minor.

XQ. 1831. As a general practice, that you experience in all lines of equipment, such as automobiles, for instance. A. On equipment, it would be dependent on the availability of the stuff that was in the equipment. That is what determines the time that it takes to repair it, as a rule.

XQ. 1832. The cost of the part itself might be very small, but replacing that part, if you had to

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tear down an engine, it would take a lot of time, would it not? A. It could take considerable time without much cost in parts.

XQ. 1833. The cost of the parts itself is not the controlling factor. It is the time involved. A. In some cases.

2413 XQ. 1834. That is, when a machine is out of use? A. In some cases.

XQ. 1835. That is the factor that usually controls, is it not, generally? A. Well, I wouldn't say that minor repairs, generally, that a lot of them; but occasionally it might and could.

XQ. 1836. As a practical proposition, contractors have to make a dividing line somewhere, and they do, do they not, between major and minor repairs?

A. Yes.

XQ. 1837. And there is a distinction between them? A. Well, major repairs, the way I have always thought, and the way it is generally done, are repairs when machines are taken to the shops and torn down and major repairs made to them, and the greater part of that we always did in the winter time when the machines weren't working.

XQ. 1838. Well, Mr. Stewart, please, is it not a fact that during the summer time and during fine weather, when your machine was working, if an axle broke, or some other part of the equipment broke, you would take that piece of equipment to your shop, would you not? A. Most of the minor repairs in the working season were done in the

shop because that was where the greater part of the tools were, and most of the men, regardless of whether it was an axle. An axle is a minor repair,

if it is broken in the actual operation, and it 2414 isn't a large item, either.

XQ. 1839. Where did you have your repair shop? It was right on the job, was it not? A. It was within 100 feet—less than 100 feet from the dam embankment.

XQ. 1840. But it was right on the job, was it not?

A. Yes. The work surrounded it.

XQ. 1841. About how many men did you employ there? A. That varied.

XQ. 1842. It varied from time to time? A. Depending upon the amount—we had enough to keep the equipment in condition.

XQ. 1843. Say, when the equipment was working constantly and you were having some of these difficulties and encountered, say, difficult terrain, or something else, say, that damaged your machines, they were then removed to the shop, were they not, for repairs? A. Yes, if they were in shape that they could get to the shop. That was the cheapest place to repair them.

XQ. 1844. About what number of mechanics would you have during those periods? A. Depending upon what was required to work on the equipment, we had that many.

XQ. 1845. Two or three or five? A. It might be two or three. It might be 25.

2415 XQ. 1846. Mr. Stewart, in your capacity as superintendent for the plaintiff, you did not have anything to do with keeping the books up in Jefferson City, did you? A. No.

XQ. 1847. You do not know anything about how the contractor set up his costs, and so forth? A. I know they had an office in Jefferson City. What they were doing there I couldn't tell you.

XQ; TSA; You just do not know? A. No. We kept the records on the job, if it was compiled on the job, that is, put up in forms—some of it was. But, as far as the job records from Vallecito, they stayed there, the most of them; until the job was finished. If there was anything sent to Jefferson City, I don't know, and I could not state whether there was any or not sent to Jefferson City.

XQ. 1049. You kept job records? A. I didn't.

Signature XQ. 1850. You did not personally? A. No.

XQ. 1851. But job records were kept by the company at the site? A. Yes.

XQ. 1852. And men were employed to keep those records, such as Mr. Howard, who is now dead, who testified in this case? A. Yes, and there were others.

2416 XQ. 1853. Jim Handy? A. Yes.

Were present in court when Mr. Howard testified, were you not? A. Yes.

XQ. 1855. And you have some familiarity with the schedule of maintenance cost that was put in evidence by the plaintiff as its Exhibit 17-D? A.J. wouldn't want to commit myself to memory on it, and Mr. Howard testified on it.

XQ. 1856. You are familiar, though, with the fact that he testified regarding maintenance costs, and so forth? A. Yes, he did.

XQ. 1857. That was his job, was it not? A. To keep the records—that is right, sir.

XQ. 1858. And you could not go out there and check those records, could you? You did not have time? A. I didn't have to check all the records, although I was interested in it:

XQ. 1859. Now, are you also familiar with Plaintiff's Exhibit 17 that was put in evidence? A. I would have to see it.

Mr. Sweeney: Let us get that.

(The document was produced.)

XQ. 1860. We show you a photostatic 2417 copy of a document that has been offered in evidence and marked "Plaintiff's Exhibit Number 17-E. It is captioned "Schedule Showing Hourly Rental Repair and Fuel and Lubricant Rates, etc., on Equipment Used on Vallecito Dam Project, etc." Referring to Column 9, please, that is captioned "Plus Maintenance Rate Figured at Actual Cost."

Now, tell his Honor, please, do you know whether or not the plaintiff included in that any—if that . figure does not include all items of repair that were made during the operating season? A. I have testified before that I do not know how this figure was arrived at.

XQ. 1861. You just do not know about that? That was somebody else's job to tend to that? A. To keep the records and figure out the rental rates.

XQ. 1862. In the course of your direct examination, you textified regarding the cost of parts and labor on the Panama job.

Now, tell his Honor, please of it is not a fact that the cost of parts on the Panama job was greater than at Vallecito. A. I would have to compare the figures to tell you.

XQ 1863. You would have to check that? 2418 A. Yes.

XQ. 1864. But, as a general proposition, based on your experience as a superintendent, and knowing that the parts would have to be shipped from the United States—as a general proposition, it would be greater? A. Please repeat the question.

(Question Number 1864 was read by the reporter, as above recorded.)

A. Greater than what?

XQ. 1865. Greater than the cost of similar parts on the Vallecito job. A. Each item may be each item of parts.

XQ. 1866. The same question, please, with respect to labor—that is, the comparison between your Vallecito job and the Panama job. Skilled labor, I am talking about. You would have to pay more to get men to go to the Tropics? A. Our wage scale was higher in Panama.

XQ. 1867. That higher rate would obviously have been reflected in any cost relating to the performance of the Fanama job, would it not? A. It should.

XQ. 1868. Now, tell his Honor, please, if it is not a fact that one of the major items of maintenance costs of any such job as this, particularly in Panama, would be the cost of labor. A. That depends

upon the repair that is to be done, if you are 2419 speaking of repairs.

XQ. 1869. Skilled labor A. It depends upon the part that must be repaired—

XQ. 1870. (interposing) And the parts also constitute— A. (resumed) —as to whether the cost would be greater in labor or greater in parts.

XQ. 1871. And the cost of parts also constitutes one of the major items of maintenance? A. Labor and parts and the expense relating thereto is the major cost of any repair.

XQ. 1872. Consequently, it follows that the maintenance costs in Panama would have been higher than at the Vallecito job—is that not a fact, as a general proposition? A. It depends upon how you are applying it.

XQ. 1873. As a general proposition. A. By the unit of excavation, or work to be done, by the hour, or for the full job, for all the equipment—it depends upon how you mean.

XQ 1874. Taking into consideration that both jobs were performed in the same manner, so far

as they involved earth removal and using similar equipment. A. No, they didn't.

Mr. Ruddiman: I move to strike that out, and object to that question. There has been no proof that the jobs were similar.

2420 Mr. Sweeney: I said "assuming," if your Honor please.

Mr. Ruddiman: There is no basis for the assumption.

Mr. Sweeney: Earth removing jobs, and using similar items of equipment—there has been plenty of testimony that on jobs of this kind they used substantially the same equipment. Perhaps some items were a little larger.

Commissioner Evans: Objection overruled.

Mr. Sweeney: May I ask your Honor to indulge me just a moment, please, until I formulate a question?

Commissioner Evans: Yes.

(There was a short pause.)

By Mr. Sweeney:

XQ. 1875. Now, with respect, please, to operations in Borrow Pit Number 1, tell his Honor, please, if it is not a fact that you had some laborers and also a truck at times removing cobbles from that material—that is, plus 5 inch cobbles from that material. A. That came from Borrow Pit 1?

XQ. 1876. Yes. A. And where would this equipment be?

XQ. 1877. On the fill. A. No.

XQ. 1878. You did not have any there? A. No. The rock that came out of Borrow Pit 1 was thrown off to the side as the shovel came through, 2421 and that was thrown off the dump by the regular laborers that were on the dump for picking roots and helping on the embankment.

XQ. 1879. Tell his Honer, please, if it is not a fact that it was their job to pick out rocks, among other things, including roots, from the fine materials that were put in the fill. A. I just said the men that were put there—that were on the embankment for the purpose of picking up roots, if there was an occasional stone came into the embankment, they picked it up, or the dump man would, or the water man did it—whoever was around. There was no crew put there for the express purpose of taking stones that came in from Borrow Pit Number 1 and taking them from the embankment and putting them into the Number 4 section.

XQ. 1880. You do not mean to tell the Court that you did not obtain any plus 5 cobbles from Borrow Pit Number 1? A. I wouldn't say we didn't obtain any. The quantity was negligible. It was so negligible that it wasn't necessary to set up any labor or crew to remove it.

XQ. 1881. It was negligible as compared with the quantity of cobble that you encountered in Pit Number 2? A. It was a negligible amount compared to the quantity of earth from Pit Number 1.

XQ. 1882. But you would have to get cobbles to

build that dam? A. Yes, but we didn't get them from Number 1.

XQ. 1883. But you would have to get them from some source, would you not? A. Yes.

XQ. 1884. And, as indicated in bid item which you submitted, on Page 46— A. (interposing) In the year 1940 we got them from Pit Number 2.

- XQ. 1885. I am discussing bid items which contemplated that you would place 250,000 cubic yards of cobble. A. That was what it was estimated it would take.

\* XQ. 1886. And if you did not get those cobbles from Pit Number 1, or from the required structural excavation, you had to get them from some other source, did you not? A. If we didn't get them from the structural excavation, there was supposed to be a borrow pit, and there was none came out of there until after I left the job.

XQ. 1887. And that is Item 17, and the quantity set up is 50,000? A. Yes.

XQ. 1888. That was set up as a deficiency in case you did not get enough from the required structural excavation? A. Yes. There was a deficiency amounting to a great lot more than this after the structural excavation, or the required excavation was completed.

2423 XQ. 1889. Are you familiar with the fact that you were actually paid for placing 331,-000 cubic yards? A. If I checked it I could familiarize myself with it.

XQ. 1890. Mr. Stewart, did I understand you correctly to testify that all overhauling on the equipment was done during the winter time? A. I don't know if I said—I don't remember if I said all, or not.

XQ. 1891. What are the facts, if I did not understand you correctly? A. But the greatest part of the overhauling and major repairs were made in the winter time. When we first started the job there was some of the equipment come from Wolf Creek Pass. That was repaired before it went to work.

There was one Loraine shovel that was completely gone over, or, that is, major repair performed on it, before it went to work.

XQ. 1892. Do you remember the D-8 tractors that you had on the job? A. Yes, I think we had 13 D-8 tractors.

XQ. 1893. And do you remember the condition in which they were when they came on the job? A. Quite well, yes, sir.

XQ. 1894. They came off the Wolf Creek 2424 Pass job, did they not? A. Some of them. I can't tell you how many—four or five.

XQ. 1895. That job was performed up in very rugged country, up at an elevation of 8,000 odd feet, was it not? A. I think some of it was over 8,000, and some of it was lower than the elevation at the Vallecito Dam.

XQ, 1896. Tell his Honor, please, if it is not a fact that a considerable part of that equipment to

which we have just referred, when it was brought in to the Vallecito Dam job, it had to be practically rebuilt? A. That is not a fact.

XQ. 1897. What are the facts? A. The fact is, when that equipment came in there, there was lower rollers—that is, track rollers—that were in bad shape. We replaced them and put the equipment to work immediately. Most of the tractors that came in to the job went to work at once.

XQ. 1898. You say they were put to work at once? Is it not a fact that some of those tractors had to be practically torn down and put in condition, so that you could put them to work at once & A. No, that is not a fact.

XQ. 1899. I also understood you to testify that maintenance costs—I believe you qualified it some-

what—in some instances exceed the cost of 2425 major repairs—that is, on a difficult job. Did you testify to that? A. I don't remember if I testified to that or not.

XQ: 1900. First, taking into consideration maintenance expenses— A. (interposing) Yes.

XQ. 1901. There is a distinction between maintenance expenses and major repairs.

Now, I understood you to testify, in substance, that in some cases, particularly on difficult jobs, the maintenance costs sometimes exceed the cost of major repairs. A. If the time and everything is taken into consideration, it could.

XQ. 1902. Now, with regard to this job, you would not say, though, that the maintenance cost

would have exceeded the cost of major repairs, would you? A. Which job?

XQ. 1903. We are talking about the Vallecito job. A. Please repeat the question.

(Question Number 1902 was read by the reporter, as above recorded.)

A. In many instances it would and could.

XQ. 1904. That would be true of any job, would it not, depending upon if you had an accident to a machine, or something? A. It could be.

about the job down here at Vallecito, as compared with other similar dam jobs, if you know? A. Not compared with other similar dams in similar locations and similar conditions.

XQ. 1906. You do not mean to tell the Court, please, that the maintenance costs on every item of equipment used on the Vallecito job would have exceeded the cost of major repairs on the job? A. I didn't tell him that.

XQ. 1907. And you would not, would you? A. I didn't tell him that.

XQ. 1908. As a matter of fact, they did not, did they? A. I didn't tell him that, and I wouldn't tell him that.

XQ. 1909. Do you remember that you testified regarding the 12 and 15-yard Euclid trucks that came on the job—testified regarding their condition? A. At what time?

XQ. 1910. At the time they came on the job.? A. The 12 and the 15-yard ones?

XQ. 1911. Yes. A. Yes, I testified to that.

XQ. 1912. The Euclid trucks? A. Yes.

the trucks had been used on the Ogollalla, Nebraska, job before they were brought to the Vallecito job? A. I don't remember if there was any used on the Ogollalla job. The 12 and 15-yard trucks; when I received them, were new trucks, and the only use I know they had or running they had before was in traveling to the job.

XQ. 1914. Do you know whether or not some of them were classified as, perhaps, second hand, that they had been used on other jobs, perhaps at least two other jobs, by the Wunderlich Company? A. I don't know that.

XQ. 1915. You do not know that? A. I was not aware of that. I thought they were new trucks. They appeared to be new trucks. They operated like new trucks.

XQ. 1916. You also testified regarding the comparative cost of making repairs to the sheepsfoot rollers.

Tell his Honor, please, if it is not a fact that, out of a number of sheepsfoot rollers that you had on the job, three of them were secondhand? A. Either two or three.

XQ. 1917. Three out of the four? A. If we had four, three of them were secondhand.

2428 XQ. 1918. And they were practically worn out, were they not, when they were brought to the job? A. No.

XQ. 1919. Tell his Honor, please, if it is not a fact that one of the three that have been referred to as secondhand, had to be completely overhauled before it could be used on the job. Do you recollect that? A. We may have overhauled it before we used it on the job; but the only new roller we had, in order to get it to operate properly, cost us more than any one of the three used ones we had. In order to get it to operate properly, it cost us more than any one of the three rollers that were used.

XQ. 1920. In other words, a new piece of equipment cost more than a secondhand piece? A. Yes, it did, to keep up and keep in shape so that it would

operate properly.

XQ. 1921. And you would probably have to pay more for a new piece of equipment than three, or probably a half a dozen secondhand ones. A. I don't know what the new one cost, and I don't know what the second hand ones cost.

XQ. 1922. Speaking from memory, you would not tell the Court that you recollect those facts?

A. What facts?

XQ. 1923. The facts to which you are testi-2429 fying now--you could not recall them with certainty? A. I recall the time it took us—I mean, I know it took us a lot of time to do various things. I remember such things as that. I can't remember definite times or amounts of time.

XQ. 1924. Do you remember that you had considerable difficulty on the job because of the fact that

your sheepsfoot rollers were not operating efficiently, the teeth wore out and probably the water tanks leaked and wouldn't carry the necessary ballast, and so forth? A. No, that is not a fact.

XQ. 1925. You do not recollect it? A. To be a fact—no.

XQ. 1926. You have also testified regarding the charging of parts on this job to pieces of equipment. I believe you testified that they were not charged out until they were actually placed on the equipment.

Do you know that, as a matter of fact, yourself, not having kept these books or records? A. Right on the job was our Parts Department. We had a man, two shifts, in charge of that Parts Department. He kept a record and had a sheet at the window and every part that went out of there was charged to the piece of equipment it went to, if it

was bolts, nuts, washers, or parts, or any-2430 thing else.

XQ. 1927. Do you know whether or not the company's office records would reflect that at Jefferson City? A. The records that he kept went direct to the office.

XQ. 1928. You do not know? A. They went to the office for that purpose.

XQ. 1929. You do not know what the company at Jefferson City—what their records reflect, do you? A. No.

XQ. 1930. You do not know, even, if they kept

any records until they were prepared to make a claim on this job in 1940? A. Who?

XQ. 1931. 'The Wunderlich Company. A. I know they kept records. I know the records on parts, time, loads and all of that was kept.

XQ. 1932. You do not know what kind of a bookkeeping system they kept at Jefferson City, do you? A. I can't explain it. As a rule, various operators use various methods of keeping books.

XQ. 1933. We want to know with certainty what you know about this job, though. And what they did with regard to keeping records, you yourself do not know personally? A. How they kept them—no; or what method they used.

XQ. 1934. You testified regarding the loss of operating efficiency, particularly, of motors at 2431 altitudes of 7500 feet, referring to Vallecito. A. Repeat that, please.

(Question Number 1934 was read by the reporter, as above recorded.)

XQ. 1935. Do you remember that? A. Yes, I testified to the operations of equipment and motors at various elevations.

XQ. 1936. And you said at sea level the motors would operate more efficiently. A. Yes.

XQ. 1937. Now, with respect to conditions at Panama, is it not a fact that at that low elevation you will encounter more mud and water at Panama and at other tropical places, than you did at Vallecito? A. At times, we did.

XQ. 1938. Is it not a fact that that would very greatly impair the operating efficiency of your machines? A. When we had heavy rains there, it was necessary to shut down.

XQ. 1939. You shut down completely? A. But we didn't work in the heavy mud.

XQ. 1940. And following the heavy mud, you went to work as quickly as you could, and that would be a great strain on machinery, would it not?

A. If we did.

2432 XQ. 1941. And that might break and wreck them? A. If we did, we could wreck them.

XQ. 1942. Now, with respect to Vallecito, please, tell his Honor, please, if it is not a fact that as soon as the cold weather struck at that high elevation, which was somewhat early, that you shut down operations and that you only operated during the, say, better parts of the working season.

A. Are you referring to the operation at the project?

XQ. 1943. At Vallecito. A. That is not true.

XQ. 1944. I am referring, now, of course, to the major part of the job—the placing of the earth fill on the embankment. A. The placing of the earth fill on the embankment—yes. We could not place that under freezing conditions—placing the earth fill on the embankment.

XQ. 1945. That was the major part of the work, was it not—excavating and placing? A. That was

the major item. I would not testify that it was the major part of the work.

XQ. 1946. You could not do that under freezing conditions, could you? A. Not placing the 2433 earth embankment.

XQ. 1947. And tell his Honor, please, if it is not a fact that that part of the work which you have just mentioned was shut down about four or five months out of the year due to freezing weather.

A. Three to five months—somewhere in there.

Mr. Sweeney: That is all, if your Honor please, on that.

Commissioner Evans: Note a recess.

(There was a short recess.)

### Redirect Examination

## By Mr. Ruddiman:

RDQ. 1948. Mr. Stewart, do you know of any general practice of the trade which classifies repairs which take one shift or less as minor repairs, and repairs that take more than one shift as major repairs? A. No.

RDQ. 1949. Did you have to put additional men or equipment on the embankment to take care of removal of plus 5 inch rocks from material which had come from Pit Number 1? A. No.

RDQ. 1950. During the 1940 working season were overhauls or major repairs performed at the Vallecto job? A. Repeat that, please.

(Question Number 1950 was read by the reporter, as above recorded.) Mr. Sweeney: Objected to, if your Honor 2434 please, unless a foundation is laid to indicate just what are major repairs and overhauls. Otherwise, the question is too general.

Commissioner Evans: Subject to cross examination, the objection is overruled.

A. No, we didn't.

By Mr. Ruddiman:

RDQ. 1951. Are the D tractors involved in Claim Number 17, Mr. Stewart? A. I think there are some.

Commissioner Evans: What do you mean "involved"?

By Mr. Ruddiman:

RDQ. 1952. I meant, did they perform work in Borrow Pit Number 21 A. Yes.

RDQ. 1953. I show you Defendant's Exhibit Number 17-R, and point out, at Page 12 of that exhibit, Shovel Number 2. How long was that shovel on the job in Panama? A. It arrived on the job in March of 1941, and the work that it worked on was completed in the month of May, 1943.

RDQ. 1954. How many months during the year did you work in Panama? A. We worked all the months in the year.

RDQ. 1955. During the dry season how many shifts did you work? A. Worked seven days a month, two ten-hour shifts—seven days a 2435 week, two ten-hour shifts per day.

RDQ. 1956. And how many shifts did you work during the rainy season? A. One shift a day.

By Commissioner Evans:

RDQ. 1957. Can you define those seasons for us? A. One season would be the dry season. The other one would be a wet season; and the wet season, we worked one shift a day whenever climatic conditions warranted, or would permit us. And where it did permit us to work, we worked seven days a week, ten hours a day.

RDQ. 1958. What months were the dry season, and what months were the wet season? A. The dry season, as a rule, starts in the month of November and continues through the month of June. That will vary considerably.

Commissioner Evans: All right. Go ahead.

By Mr. Ruddiman:

RDQ. 1959. Was it during November to June that you worked two shifts? A. November to June would be the two-shift period.

RDQ. 1960. What was the size of the Number 2 shovel? A. It was a  $3\frac{1}{2}$  yard, Model 12 Lima—that should be a 1201 Lima.

Mr. Ruddiman: That is all.

2436 Recross Examination

By Mr. Sweeney:

RXQ. 1961. On redirect, Mr. Stewart, you testified that there was no general practice with respect to, classifying minor repairs as being made on equipment that is down for only one shift, and that if the equipment is down for more than one shift it is classified as major repairs. A. No, I didn't testify if it was down for more than one shift it would be classified as major repairs.

RXQ. 1962. Tell his Honor, please, if it is not a fact that it is the usual, standard practice— A. (interposing) No, it is not.

Mr. Sweeney: Wait a minute, please:

RXQ. 1962. (resumed)—to consider anything that requires a piece of equipment to be down for not over one shift to be classed as minor repairs. A. Please repeat that.

(Question Number 1962 was read by the reporter, as above recorded.)

Mr. Sweeney: Add "or maintenance." A. I stated before, minor repairs can run from a few minutes to several shifts.

RXQ. 1963. Now, Mr. Stewart, please, I believe you gave your age as 42 in 1946, when you testified

in this case. A. In 1946 I was 44.

2437 RXQ. 1964. Forty-four.

Do you recollect that on June 13, 1945, testifying in Denver, you were asked the question: "Give your name and age." And you testified: "B. H. Stewart, 42 years of age."

Do you recollect that? A Yes, but I corrected that later to 43, at the time of the testimony. I was 42 in part of 1945.

RXQ. 1965. You went on this job in 1938? A. Yes—13 days after I was 36.

RXQ. 1966. You also testified on redirect that during 1940 no charges were made for overhauling or major repairs—is that a fact—on the Vallecito job? A. No, it is not.

RXQ. 1967. What did you testify? A. I did not testify to that. It is in the record what I testified. If I am asked the same question—

RXQ. 1968. I understood you to testify that no major repairs were made—no charges were made for major repairs on this job in 1940. A. I don't think I so testified.

RXQ. 1969. What did you testify, please? A. I do not remember that.

RXQ. 1970. What did you testify? A. What was

RXQ. 1971. Were charges made for major 2438 repairs on this job in 1940? A. I did not testify that they were.

RXQ. 1972. Were they, I am asking you?

By Commissioner Evans:

RXQ. 1973. What is your answer now? Were they or were they not? A. I do not think so.

By Mr. Sweeney:

RXQ. 1974. Do you know, Mr. Stewart, please? A. Not to the extent that I would want to state that there was or there wasn't.

RXQ. 1975. Well, if no such separate charges were set up, it follows as a fact, does it not, that

all of the repairs made in the 1940 season would be included under the item of maintenance expense?

A. If there was no major repairs.

RXQ. 1976. With respect, please, to the earth materials that were moved from the earth Borrow Pit Number 1, tell his Honor, please, if it is not a fact that you had a crew of men working on the fill whose job it was to remove plus 5 inch rock. A. That is not a fact.

RXQ. 1977. Is it not a fact, though, that you did have some men on the fill? A. We had some men on the fill.

RXQ. 1978. And that was a part of their duties, to remove plus 5 inch rock? A. If any such 2439 stones came from Pit Number 1 to the embankment they removed them—not only the men, but such equipment that could remove them that was working on the fill for the purpose of placing the fill.

RXQ. 1979. And tell his Honor, please, if it is not a fact that there was some 5 inch rock that had to be removed from the fill. A. I stated before that there was an occasional plus 5 inch and such rock—stones that were removed from the material that came from Borrow Pit Number 1, the cost of the same was absorbed in our embankment costs—placing earth fill embankment cost.

RXQ. 1980. Now, you were the superintendent on this job? A. Yes.

RXQ. 1981. Tell his Honor, please, if it is not a fact that payment for this work, as provided by the

specifications, included the cost of placing the rocks we have just mentioned.

Mr. Ruddiman: I am going to object to that question. It calls for an interpretation of the specifications.

Mr. Sweeney: I refer to Item 19, please, of the, schedule. Would you refer to that?

Commissioner Evans: Is the purpose of the question to lay a foundation for something?

Mr. Sweeney: It is to lay a foundation, 2440 if your Honor please.

Commissioner Evans: Objection overruled.

## By Mr. Sweeney:

RXQ. 1982. Referring to the petition, Page 46, and particularly to Item 19, "Earth Fill and Embankment—3,200,000 cubic yards, at 5 cents," tell his Honor, please, if it is not a fact that the cost of removing the rocks which you have just mentioned was included in that item, if you know. A. If there was any stones came from Borrow Pit Number 1 of the earth borrow pit, that went to the embankment, we removed them and put them in the cobble fill section. The crew was set up—

Commissioner Evans (interposing): The question is, does the contract provide for the payment, if you know.

Mr. Ruddiman: I make the same objection as before.

Commissioner Evans: Mr. Sweeney is laying a foundation for another question. As such, I will permit it. If it is a matter of a conclusion, I will not permit it.

The Witness: I don't understand what Mr. Sweeney means—if it is making up the earth embankment with this 3,200,000 yards, as shown under Item 19.

By Mr. Sweeney:

RXQ. 1983. Referring to Paragraph 55 of the specifications, and I will point that out for you—refer, please, to Paragraph C—to Subparagraph C

of Paragraph 55 of the specifications, which
2441 reads, in pertinent part: "Should stone of
such size be found in otherwise approved
earth-fill embankment materials, they shall be removed by the contractor either at the site of excavation or after transporting to the embankment,
but prior to rolling and compacting the materials
in the embankment."

Now, bearing in mind that provision of the specifications, is it not a fact that the cost of removing the plus 5 rocks that you have just mentioned, would be included under Item 19 of the bid schedule? A. From the earth borrow pit—such stones that were found in the earth borrow pit, would be.

RXQ. 1984. And, now, please, tell his Honor if it is not a fact that payment for any item of plus 5 cobbles that you had to remove from either Pit Number 1 or Number 2 would be included under that item of the contract.

Mr. Ruddiman: Same objection.

Commissioner Evans: Mr. Sweeney, I still do not see what you are leading up to. If this is a matter of argument and conclusion of the witness, it ought not to go on.

Mr. Sweeney: No, it is not. I am trying to show that he was required to do that and was paid for it.

Commissioner Evans: If that is the only purpose, that is a conclusion. That is the purpose of the lawsuit.

Mr. Sweeney: We will not press that, if your Honor please.

2442 That is all, if your Honor please, on recross.

Mr. Ruddiman: That is all.

Mr. Leonard, will you take the stand.

George P. Leonard, a witness produced on behalf of the plaintiff, having been previously duly sworn by the Commissioner, was further examined, and in answer to interrogatories, testified as follows:

## Further Direct Examination

## By Mr. Ruddiman:

Q. 439. Mr. Leonard, following the time— Commissioner Evans (interposing): Pardon the interruption. What claim is this?

Mr. Ruddiman: Still on Claim Number 17.

Commissioner Evans: All right.

## By Mr. Ruddiman:

Q. 440. Mr. Leonard, following the time that plaintiff put in its testimony at Denver, did one of the defendant's auditors check the plaintiff's records and costs? A. It did.

Mr. Ruddiman: That is all.

Mr. Sweeney: No cross, your Honor.

Commissioner Evans: All right.



# SUPREME COURT, U.S.

Office Supreme Court, U. S.

APR 23 1951

CHARLES EL-MAL CHOPLEY

IN THE

# Supreme Court of the United States

OCTOBER TERM, 1959 5

No. 584

THE UNITED STATES, Petitioner,

MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARIE WUNDERLICH, E. MURIELLE WUNDERLICH and THEODORE WUNDERLICH, a Partnership, Trading Under the Name of Martin Wunderlich Company.

RESPONDENTS' BRIEF IN OPPOSITION TO PETI-TION FOR A WRIT OF CERTIORARI TO THE COURT OF CLAIMS.

> HARRY D. RUDDIMAN, JOHN W. GASKINS, Attorneys for Respondents.

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THE UNITED STATES, Petitioner,

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MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARIE WUNDERLICH, E. MURIELLE WUNDERLICH and THEODORE WUNDERLICH, a Partnership, Trading Under the Name of Martin Wunderlich Company.

## RESPONDENTS' BRIEF IN OPPOSITION TO PETI-TION FOR A WRIT OF CERTIORARI TO THE COURT OF CLAIMS

Respondents pray that the petition for a writ of certiorari to review the judgment of the Court of Claims entered in the above-entitled case on June 5, 1950, be denied.

## OPINION BELOW.

The opinion of the Court of Claims (R. 159-170) is reported at 117 C. Cls. 92.

## JURISDICTION.

The judgment of the Court of Claims was entered on June 5, 1950 (R. 170). A motion for a new trial, filed on August 14, 1950 was denied on October 2, 1950 (R. 171). By an order of the Chief Justice, dated December 26, 1950,

the time for filing a petition for a writ of certiorari was extended to and including March 1, 1951 (R. 174). The jurisdiction of this Court is invoked under 28 U.S. C. 1255.

## QUESTIONS PRESENTED.

Article 3 of the standard form government construction authorizes changes in the contract work, requires an "equitable adjustment" in the contract price on account of such changes, and provides for appeal to the head of the department as provided in Article 15 if the contractor and contracting officer cannot agree on the adjustment. Article 15 provides that "all disputes concerning questions of fact, arising under this contract shall be decided by the contracting officer subject to written appeal \* \* \* to the head of the department \* \* \* whose decision shall be final and conclusive upon the parties thereto". In this case a change was ordered, the contracting officer made an adjustment which was appealed because of the gross inadequacy of the amount allowed for rental of respondents equipment and for the cost of its repair and maintenance, and the head of the department affirmed the decision of the contracting officer. In their petition in the Court of Claims, respondents did not allege bad faith, arbitrariness; or error so gross as to imply bad faith, but did allege that the reasonable amount due on a cost plus 10 percent basis was \$181,721.10 instead of the \$44,208.85 allowed (but never paid) by the contracting officer and the head of the department. The Government's trial attorney was also aware from the outset that the only issue in this claim concerned the fairness of the administrative allowance for equipment. The Court of Claims found that the methods used by the contracting officer and the head of the department in computing the hourly rental rates for equipment and the cost of its repair and maintenance were arbitrary and capricious and that the results obtained thereby were grossly erroneous. It then set aside the administrative adjustment on the ground that it was arbitrary and capricious.

- 1. Whether the decision of the Court of Claims setting aside the administrative adjustment because it was arbitrary and capricious is in accordance with the principles of judicial review laid down by this Court.
- 2. Whether the finding of the Court of Claims that the administrative methods of computing equipment rental and the cost of its maintenance and repair were arbitrary and capricious is supported by the evidence.<sup>1</sup>

## CONTRACT PROVISIONS INVOLVED.

Pertinent portions of the contract and specifications are set forth in the Appendix, infra.

### STATEMENT.2

This case grows out of the performance of a contract to build a dam for the Government acting through the Bureau of Reclamation. Respondents received notice to proceed on April 18, 1938 and completed the work satisfactorily in October, 1941 (R. 67). Various claims arose during the performance of the work, some of which became the subject of a suit in the court below (R. 76-77). The petition for a writ of certiorari is directed only to Claim No. 17. This claim concerns the amount of an adjustment made by the contracting officer and approved by the head of the department pursuant to a change order. The dispute centers upon the amount allowed in such adjustment for the use of respondents' equipment and for its repair and maintenance.

a. Background of the order for changes and the adjustment thereunder.—The principle feature of the contract

2 Because petitioner's Statement fails to set forth certain facts pertinent to the issues here presented and draws conclusions with which respondents cannot

agree a Statement is included in this brief.

<sup>1</sup> Petitioner asserts that one of the questions presented is whether the holding of the Court below that the determination of an equitable adjustment is a question of law conflicts with *United States* v. Callahan Walker Co., 317 U.S. 56. As shown, infra, pp. 9-10, the Court below did not so hold.

work was the rolled earth-fill dark, consisting of an impervious core grading to more pervious materials upstream and downstream from the core. The upstream slove of this fill was faced with rock riprap and on the face of the down-. stream slope was a cobble fill (R. 67-68). The materials for the earth portion of the fill were to come from earth borrow pits. They were also to come from the various items of required excavation and from cobble borrow pit excavation after being separated into material 21/2 inches or more in diameter and material less than 21/2 inches in diameter. The materials for the cobble fill portion of the dam were to consist of the plus 21/2-inch material, after separation, taken from the various items of required excavation and from cobble borrow pits. No separation was specified for materials taken from earth borrow pits (R. 50, 51, 52, 54-56, 61). The contract drawings showed two areas upstream from the dam designated as earth embankment borrow pit areas, the one on the right side of the river later being designated as Borrow Pit No. 1, and the one on the left side as Borrow Pit No. 2. The contract drawings also showed a cobble borrow pit area downstream from the dam on the left side of the river (R. 68, 113). The contract unit price for excavating and hauling earth borrow (Item 14) was 23 cents per cubic yard, and for excavating, separating and hauling cobble borrow (Item 16) was 35 cents per cubic yard (R. 31).

In 1938 respondents excavated impervious materials in Borrow Pit No. 2, and exposed underlying materials containing a high percentage of cobbles. No further excavation was performed in Borrow Pit No. 2 until the late fall of, 1939, earth borrow materials meanwhile being obtained from Borrow Pit No. 1. In the late fall of 1939 respondents were directed to resume excavation in Borrow Pit No. 2 and performed such work under protest at the payment of the contract unit price for earth borrow because of the high cobble content (R. 114-115). After the winter lay-off, respondents were directed to resume excavation in Borrow

Pit No. 2 and in extensions of that borrow pit upstream and farther away from the dam, and had to resort to expensive separation processes because of the cobbles encountered. Work in Borrow Pit No. 2 was completed in November, 1940 (R. 115-117). No cobbles were ever taken from the area designated on the contract drawings as a cobble borrow pit area (R. 113).

During 1940 respondents both in writing and at conferences with the contracting officer, objected to payment of the earth borrow price of 23 cents for materials taken from Borrow Pit No. 2 because of their high cobble content (R. 115-120). Finally, by Order for Changes No. 3, dated August 31, 1940, the contracting officer directed respondents to obtain cobbles for cobble fill from "earth embankment borrow" instead of obtaining them from the cobble borrow pit area shown on the contract drawings, the claim for adjustment by reason of the change to be submitted at a later date (R. 120-121).

b. The adjustment under Order for Changes No. 3.—Respondents submitted and the contracting officer considered the claim for adjustment under Order for Changes No. 3 on the basis of the cost of excavating, separating and hauling materials from Borrow Pit No. 2 to the embankment, plus 10 percent for overhead and profit. With exceptions now immaterial he found that respondents' figures for hours of labor and rates of pay, for hours of use of equipment, and for the cost of materials were correct (R. 421). However, he found that respondents' hourly rates for the use and maintenance of equipment were excessive and allowed for these items much less than claimed by respondents (R. 122).

The hourly rates used by the contracting officer to reimburse respondents for the use or rental of their equipment were derived from monthly rates appearing in the Bureau of Reclamation's equipment rental schedule (Pltf. Ex. 17-C), which in turn is based upon and similar to the Asso-

ciated General Contractors' equipment schedule (Pltf. Ex. 17-B). In each the monthly rates are designed to reimburse the contractor for the annual expense of interest on invested capital, depreciation, insurance, taxes, storage, major repairs, general overhauling and painting and equipment overhead. They cover the use of equipment only and do not cover field repairs and maintenance which are paid for separately. These monthly rates are obtained by dividing the total average annual expense for such items by the average number of working months (in most cases eight) that the equipment is used. In each schedule the monthly rates are based upon one-shift operation. Where the equipment is on two-shift operation, one-half of the first shift rate is added for the second shift (R.125-127). The 'Associated General Contractors' monthly equipment rates are paid for the entire calendar period that the equipment is assigned to the job without deduction for the time that the equipment is idle (Pltf. Ex. 17-B, pp. 2-3). Likewise, as respondents' own witnesses admitted (Tr. 1665-1666, 1689-1691),3 when the Bureau uses its monthly rates the contractor is paid the full monthly rate even though the equipment may be idle part of the time due to weather, holidays or repairs.

In the adjustment under Order for Changes No. 3, monthly rates could not be applied because respondents' equipment was constantly shifting back and forth between work in Borrow Pit No. 2 and other items of the work. Records were kept of the hours of actual operation and hourly rates therefore had to be used in the adjustment (R. 127). There is no dispute as to the fairness of the Bureau's monthly rates but only as to the method by which they were reduced to hourly rates for application to hours of actual operation (R. 125). What the contracting officer did in the case of suipment which was only on one-shift

<sup>3</sup> The citation "Tr." refers to the transcript of testimony which was sent up by the Court of Claims, together with certain exhibits and other portions of the record in the case (R/171-174).

operation was to divide the monthly rate by 30 to get a daily rate, and divided the daily rate by 8 to get an hourly rate, and applied such hourly rate to hours of actual opera-This method obviously failed to reimburse respondents for the idle time which is customarily paid for in the Bureau's monthly rate. Most of the equipment was in actual operation on the first shift about 80% of the working season and on the second shift about 80% of the first shift use. For equipment so used the contracting officer divided the monthly rate by 30 to get a first shift rate, added onehalf for the second shift, and divided the total by 16 hours to obtain the hourly rate to be applied to hours of actual operation (R. 127, Deft. Ex. 17-W; Tr. 1660, 1664-1665, Thus, in addition to failing to reimburse respondents for the idle time customarily paid for in the monthly rate, the contracting officer's hourly rates gave equal weight to the lower second shift rate although the equipment was used much more fon first shift operations. As found by the Court below, this method of computing hourly rental rates for equipment was arbitrary and capricious, and the result arrived at by this method was grossly erroneous (R. 170-171).

In addition to the hourly rental rates the contracting officer also used hourly rates, for repair and maintenance of the equipment. These rates were not based upon respondents' actual/costs. They were arrived at by the use of arbitrary percentages and represented only a small fraction of respondents' actual costs for repairs and maintenance (R. 129-130). As found by the Court below, the method used by the contracting officer in determining these rates was arbitrary and capricious and the result obtained thereby was grossly erroneous (R. 171).

Basing his award for use of respondents' equipment on rental and maintenance allowances computed in the manner just described, the contracting officer concluded that respondents were entitled to an equitable adjustment of \$40,400.15 in addition to the \$194,784.93 already paid for

the excavation in Borrow Pit No. 2 during 1940 (Pltf. Ex. C, p. 48). Applied to the yardage excavated in 1940, this represented a rate of \$0.0477 per cubic yard in additional compensation which the contracting officer then allowed for the 79,847 cubic yards excavated in Borrow Pit No. 2 during 1939 (Id. p. 50; R. 122). Adding the \$3,808.70 so determined, the contracting officer awarded respondents a total of \$44,208.85 in his decision of December 29, 1942 (R. 122, 125).

Petitioner appealed to the Secretary of Interior from the decision of the contracting officer, pointing out, among other things, that in reducing the monthly equipment rates to hourly rates the contracting officer deprived respondents of the allowance for idle time which is included in the monthly rates (R. 125, Pl. Ex. D, pp. 56-57). On appeal the Assistant Secretary of the Interior affirmed the allowance of the contracting officer in a decision which did not even discuss the fact that the method used by the contracting officer in reducing the monthly equipment rates to hourly equipment rates to be applied to hours of actual operation failed to reimburse respondents for the idle time paid for in the monthly rates (R. 125, Pltf. Ex. E, pp. 14-16).

c. The decision of the Court of Claims.—The Court below found that the methods used by the contracting officer and the head of the department in computing hourly rental rates for equipment and the cost of its repair and maintenance were arbitrary and capricious and that the results arrived at thereby were grossly erroneous (R. 127-130, 170-171). The Court of Claims set aside the decision of the contracting officer and head of the department because of the arbitrary and capricious administrative treatment of respondents' claim (R. 168-169). Using hourly rental rates which made an allowance for the idle time paid for under the monthly rates, and using rates for repair and maintenance of equipment based upon respondents' actual costs, the Court of Claims awarded respondents \$155,748.44 in lieu of the \$44,208.45 allowed (but never paid) by the contract-

ing officer and the head of the department on this claim (R. 127-132, R. 169).

### REASONS FOR DENYING THE WRIT.

1. Petitioner asserts that the Court of Claims held that the administrative adjustment in Claim No. 17 involved a disputed question of law which was not covered by Article 15 relating only to disputed questions of fact. Thus, says petitioner, this holding conflicts with United States v. Callahan Walker Construction Co., 317 U. S. 56. Respondents never made any such contention nor did the Court of Claims so hold as a reading of its decision will demonstrate. Petitioner relies on certain language of the Court below in the introductory part of its opinion (R. 161-166). There the Court was considering the question of the finality of the contracting officer's decision in situations where respondents were directed to perform a certain work which they contended was outside the requirements of the contract documents and requested written instructions which the Government failed to give. Distinguishing the provision of the specifications involved in United States v. Moorman. 338 U.S. 457, the Court of Claims held that paragraph 14 of the specifications in the present case did not purport to make the decision of the contracting officer or head of the department final on questions of interpretation of the requirements of the contract documents where the con-

<sup>4</sup> Paragraph 14 of the specifications (R. 72) provides:

<sup>14.</sup> Protests.—If the contractor considers any work demanded of him to be outside the requirements of the contract, or considers any record or ruling of the contracting officer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or decision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within 17 days after date of receipt of the written instructions or decision, he shall file a written protest with the contracting officer, stating clearly and in detail the basis of his object'ons. Except for such protests or objections as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions, or decisions of the contracting officer shall be final and conclusive. Instructions and/or decisions of the contractors shall be considered as written instructions or decisions subject to protest or objections as herein provided.

tractor had followed the prescribed avenue of administrative relief as far as possible to do so. The Court below then went on to hold that the failure of paragraph 14 to make administrative decisions final on disputes as to the interpretation of the contract requirements was not cured by Article 15 which related only to questions of fact and not to questions of law such as interpretation of the contract documents.

The situation to which this part of the Court's opinion was directed applied in nearly every claim except Claim No. 17. In Claim No. 17, however, there was no refusal by the Government to give written instructions nor is there any dispute over interpretation of the requirements of the contract documents. On the contrary, by issuing Order for Changes No. 3, defendant admitted that the work required in this claim was a change in the contract requirements. In that portion of the opinion dealing specifically with Claim No. 17 (R. 167-169) the Court pointed out that the dispute in this claim was as to the amount of the actual cost of the work, and does not even suggest that any question of interpretation of the specifications is involved. It set aside the administrative adjustment because of the arbitrary and capricious treatment of this claim. therefore, clear that the Court below did not consider or hold that the dispute in Claim No. 17 involved a question of law, i.e., an interpretation of the contract documents. Thus, its decision is not in conflict with United States v. Callahan Walker Construction Co., supra.

2. The holding of the Court of Claims that the administrative adjustment should be set aside because of the arbitrary and capricious methods used by the contracting officer and head of the department in computing equipment rental and the cost and maintenance of equipment, is not in conflict with the principles of judicial review laid down by this Court. This Court has laid down the rule that administrative decisions under a contract may be set aside where they are the result of fraud, failure to exercise an

honest judgment, bad faith, or so grossly erroneous as to imply bad faith. Kihlberg v. United States, 97 U. S. 398, 402; Sweeney v. United States, 109 U. S. 618, 620. In later cases this Court, in explaining the rule, stated that the administrative officer making the decision must act, not arbitrarily or capriciously, but candidly and reasonably, and with due regard to the rights of both parties. Ripley v. United States, 223 U. S. 695, 701-702; Saalfield v. United States, 246 U. S. 610, 613. In the present case the Court below found that the methods used by the administrative officer in computing equipment rental and the cost of its repair and maintenance were arbitrary and capricious and the results obtained thereby were grossly erroneous, and held that the administrative determination should be set aside because of the abritrary and capricious administrative treatment of respondents' claim. It is thus clear that its decision is in accordance with the principles of judicial review laid down in the cases decided by this Court.

No case cited by petitioner holds that an administrative decision which is arbitrary and capricious may not be set aside merely because it is not so characterized in the pleadings. As a matter of fact the contrary appears from the decision of this Court in United States v. Smith, 256 U.S. There an excavation contract described the material to be removed as consisting of "clay, sand, gravel and boulders" and made the decision of the Government engineer final on questions of quantity and quality. He ordered the contractor to remove bed rock arbitrarily classifying it as clay, gravel, sand and boulders. Despite the Government's contention that the contractor had not pleaded bad faith on the part of the Government officer, this Court refused to follow his classification of the materials and allowed recovery by the contractor for breach of warranty. In Ripley v. United States, 223 U.S. 695, this Court affirmed a decision of the Court of Claims setting aside an administrative determination which was grossly erroneous and an act of bad faith. Yet the pleadings in that case show. that neither gross error nor bad faith were alleged. Moreover, in the present case it is clear that the Government trial attorney was fully aware that the good faith of the administrative officer was in issue. The petition itself alleged that the reasonable amount due respondents on a cost plus 10% basis was \$181,721.10, instead of the \$44,208.85 allowed, but never paid, by the contracting officer and the head of the department (R. 10); in other words, that on a cost plus 10% basis there was reasonably due them more than four times the amount allowed. The Government trial attorney, early in his cross-examination, inquired:

657XQ. Isn't it a fact that the only controversy now between the parties is as to the fairness of the so-called rental rate! (Tr. 532. See also Tr. 268.)

At no point did he ever object to the materiality or relevancy of respondents' evidence attacking the administrative methods used in arriving at the allowance for equipment, or claim that he was misled in the preparation of his defense. Under these circumstances it is clear that an express allegation of bad faith, or arbitrary and capricious conduct, or failure to exercise an honest judgment, or gross error, was not necessary in order to set aside the administrative determination.

3. The finding by the Court of Claims that the methods used by the contracting officer and head of the department in computing equipment rental rates and the cost of equipment repair and maintenance were arbitrary and capricious and that the results obtained thereby were grossly erroneous is fully supported by the evidence, including that of petitioner's own witnesses. Here the hourly rental rates used by the contracting officer and the head of the department were computed by taking \$\frac{1}{2}\$0 of the Bureau's monthly rates to get a daily first shift rate, one-half of the first shift rate was added for the second shift rate, and the total of the two shift rates was divided by 16 hours to obtain an hourly rental rate (Pltf. Ex. 17, pp. 70-77; Tr. 864-866; Tr.

1660, 1664; Deft. Ex. 17-W, Tr. 1678-1680). As admitted by the subordinates in the contracting officer's office who prepared these hourly rates, the Bureau's own monthly rates are paid for the full period that the equipment is assigned to the job without deduction for idle time due to such factors as holidays, weather and repairs (Tr. 1665-1666; Tr. 1686, 1690-1691. See also testimony of respondents' witness Leonard, Tr. 861-863, 866). The hours to which the hourly rates were to be applied were hours of actual operation as the contracting officer had been advised by the Bureau's field office (Deft. Ex. Q). It is obvious, as appears from respondents' testimony (Tr. 866-867) that hourly rental rates derived from the Bureau's monthly rates in the manner followed by the contracting officer do not, when applied to hours of actual operation, make any allowance whatsoever for the idle time which is paid for when the Bureau's monthly rates are used. None of respondents' witnesses ever attempted to deny this fact. On the contrary, respondents' field engineer admitted that such hourly raises made no allowance for idle time (Tr. 1718). Applied to hours of actual operation such hourly rates could never, because of time lost on account of weather, repairs, etc., yield the amount due under the Bureau's monthly rates which everyone agrees are fair and reasonable. In their appeal to the head of the department, respondents protested that the contracting officer's hourly rates took no account of the idle time paid for under the monthly rates (Pltf. Ex. D, pp. 56-57). In his decision on appeal, however, the head of the department never even referred to this vital defect (Pltf. Ex. E, pp. 14-16). Moreover, as stated supra, page 7, these hourly rates not only failed to allow for idle time but were grossly unfair for the further reason that they were derived by giving equal weight to both the daily first shift rate and the daily second shift rate (which was one-half the first shift rate) even though the equipment was used much less time on second shift operations than on first shift. In view of the

above, the conclusion is inescapable that the administrative method used in arriving at the hourly rental rates—a method which none of respondents' witnesses even attempted to justify—was not an honest attempt to act with due regard to the rights of both parties, but was, as the Court of Claims found, arbitrary and capricious.

In its brief (pp. 21-22) petitioner seeks to give some justification for the failure of its hourly rates to make any allowance whatsoever for idle time by asserting that the equipment was used not only in Borrow Pit No. 2 but also on other items for which respondents were paid at contract unit prices which presumably reimbursed them for rental of equipment, including idle time, and that by applying its hourly rates to hours of actual operation in Borrow Pit No. 2, the Bureau avoided a possible duplication of payment for idle time. There is no merit to this contention nor a word of testimony to support it. Whether the contract unit prices for work other than that involved in Borrow Pit No. 2 made too little or too much allowance for equipment rental is not shown nor is it material or relevant. For the work in Borrow Pit No. 2 respondents are entitled to a reasonable allowance for the use of their equipment, including a rental which would reimburse them for a fair share of the idle time which is customarily paid for in the rental of equipment. The Court below has made such an allowance by dividing the total rental which would be due respondents for the 1940 working season under the Bureau's monthly rates by the total hours ht could normally be operated, taking into account idle time, on all items of work during the same season. The hourly rate thus computed was then multiplied by hours of actual operation in Borrow Pit No. 2 to obtain the rental attributable to work in Borrow Pit No. 2 (R. 127-129). This method avoids any duplication of payment for idle time by arriving at an hourly rate which is fair and reasonable for all hours of operation on the job and applying it only to hours of actual operation in Borrow Pit No. 2. The hourly rates

used by the contracting officer and head of the department, on the other hand, make no allowance whatsoever for idle time. For example, the screening plant was used only on work on Borrow Pit No. 2 during 1940 (R. 116-117); yet the contracting officer and head of the department did not use the monthly rate but used an hourly rate which made no allowance for idle time when applied to hours of actual operation (Deft. Ex. 17-W).

Neither can petitioner justify its hourly rental rates by asserting that the Associated General Contractors' monthly rental rates, upon which the Bureau's monthly rates are based, are merely a guide, and are subject to change in the light of experience. There is not a word of testimony, even after petitioner's auditors inspected respondents' cost records, to suggest that the Bureau's monthly rates were not fair and reasonable in this case. Neither party has ever questioned the fairness of such monthly rates. The only dispute is as to the method of reducing them to hourly rates to be applied to hours of actual operation.

As to the hourly repair and maintenance rates used by the contracting officer and head of the department, the Government employee who prepared these rates admitted that they were not based upon costs on this job (Tr. 1672-1674, 1691-1692), even though paragraph 8 of the specifications (Appendix, infra, p. 19) gives the contracting officer complete access to all data of the contractor needed to determine cost. While this witness stated that these hourly rates were based upon the experience of the Bureau and certain other Federal and State agencies (Tr. 1679-1680), he was unable to say how he arrived at the hourly rates used in the adjustment (Tr. 1688). He was requested to furnish to the Court the data he was supposed to have considered in arriving at such hourly rates (Tr. 1688-1689), but never did so nor accounted for his failure to do so. a matter of fact. Defendant's Exhibit 17-W, which this witness prepared at the time the claim for adjustment was under consideration (Tr. 1674-1675) shows on its face that

these hourly rates did not purport to be based on costs on any job but were mostly arbitrary assumed percentages.

Against these rates are respondents' hourly rates computed by dividing the actual cost for repairs and maintennance for each type of equipment during the 1940 working season by the total hours it worked on all items of work, including Borrow Pit No. 2, during the same season, all these figures being taken from respondents' cost records for the present job (Pltf. Ex. 17-D; Tr. 809-816). There is no real dispute as to the accuracy of such costs or hours, since petitioner, during the trial, sent its auditor to respondents' field office to check these costs but never even called him as a witness (Tr. 2442). The hourly repair and maintenance costs found by the Court of Claims were based upon petitioner's actual costs on the present job, and demonstrated that the amounts allowed for repair and maintenance hourly rates by the contracting officer were only a small fraction of the actual costs experienced (R. 129-130): In view of the above it is clear that the evidence fully supports the finding of the Court of Claims that the method used by the contracting officer and the head of the department in determining the cost of maintenance and repair was arbitrary and capricious and that the result obtained thereby was grossly erroneous.

4. No important questions of law or of public interest are presented by this case. As stated before it was decided by the Court below in accordance with the principles laid down in the decisions of this Court. The case merely presents certain factual questions relating to reimbursement of equipment which are peculiar to this case; have not, to respondents' knowledge, arisen in other cases; and are not likely to do so in the future.

## CONCLUSION.

The decision below is in accordance with the decisions of this Court and raises no new important questions of law or of public interest. It is, therefore, respectfully submitted that the petition for a writ of certiorari should be denied.

HARRY D. RUDDIMAN, JOHN W. GASKINS, Attorneys for Respondents.

April, 1951.

#### APPENDIX.

Article 3 of the contract provides:

Changes .- The contracting officer may at any time, by a written order, and without notice to the sureties, make changes in the drawings and/or specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall be made and the contract shall be modified in writing accordingly. No change involving an estimated increase or decrease of more than Five Hundred Dollars shall be ordered unless approved in writing by the head of the department or his duly authorized representative. Any claim for adjustment under this article must be asserted within 10 days from the date the change is ordered: Provided, however, That the contracting officer, if he determines that the facts justify such action, may receive and consider, with the approval of the head of the department or his duly authorized representative, adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in article 15 hereof. But nothing provided in this article shall excuse the contractor from proceeding with the prosecution of the work so changed.

## Article 15 of the contract provides:

Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereto. In the meantime the contractor shall diligently proceed with the work as directed.

## Paragraph 8 of the specifications provides:

8. Data to be furnished by contractor.—The contracting officer, through his authorized agents, shall have access to all pay rolls, records of personnel, invoices of materials, and any and all other data relevant to the performance of the contract or necessary to determine its cost, and the contractor shall furnish at the end of each month an itemized statement in a form satisfactory to the contracting officer of the cost of all work under the contract.

the Government would be the financial loser since substantial amounts would have to be included in all bids to safeguard against arbitrary and capricious action.

B. An express allegation of fraud or bad faith is not necessary.—In its brief (pp. 16-19) the Government asserts that the contractor did not allege that the department head's decision was fraudulent, or made in bad faith, or so grossly erroneous as to imply bad faith; that proofs were not directed to the single issue of bad faith and that the Government never had any occasion to defend itself against a charge of fraud or bad faith. Relying on certain decisions of this Court, petitioner then apparently contends that in the absence of such allegations the Court of Claims should not have set aside the departmental decision.

Petitioner submits that the Government was not misled by any lack of an express allegation of bad faith. The petition alleged that the reasonable amount due the contractor on a cost plus 10 percent basis was \$181,721.10, instead of the \$44,208.85 allowed, but never paid, by the contracting officer and the head of the department (R. 10). An allegation that the cost reasonably due the contractor was more than four times the amount allowed should have put the Government on notice that the good faith of the contracting officer and head of the department were in issue. That it actually did so is shown by the fact that early in his cross-examination the Government trial attorney inquired:

XQ. 657. Isn't it a fact that the only controversy now between the parties is as to the fairness of the so-called rental rate.

A. Yes, I understand that. (See p. 56 of Appendix C to Brief for the United States).

In its brief (Footnote 11, pp. 18-19), the Government asserts that the issue of the fairness of a rate is at opposite poles with the issue of the honesty of the person who is charged with deciding what is a fair rate. Certainly the question of the fairness of the rate involves the question whether the department head acted "reasonably and with due regard to the rights of both the contracting parties". See Ripley v. United States, 223 U. S. 695, 702.

At no point did the Government trial attorney object to the materiality or relevancy of respondents' evidence attacking the administrative methods used in arriving at the contracting officer's and the department head's allowance for equipment. Moreover, the Government itself introduced inter-office memoranda between the department head or the contracting officer and their subordinates showing the information that was submitted by the subordinates. to aid their superiors to arrive at their decisions (Defts. Exs. K, Q, T, 17-E, 17-U, 17-V, 17-X). The statements in . these memoranda, being hearsay, obviously were not com-c/ petent proof of the facts stated therein. They could have been introduced for no other purpose than to show what factors the contracting officer and head of the department took into account in arriving at their decisions and thus to attempt to show that such decisions were made in good faith.

In view of all of the above it is clear that the Government was well aware that the good faith of the decisions of the contracting officer and department head were being challenged, and that defendant was not perjudiced by lack of any express allegation of bad faith or arbitrariness and capriciousness. Under these circumstances the petitioner should not now be permitted to assert that the administrative decision may not be set aside for lack of such an allegation. As stated by this Court in District of Columbia v. Barnes, 197 U. S. 146, 154:

"The Court of Claims is not bound by special rules of pleading. The main purpose is to arrive at and adjudicate the justice of alleged claims against the United States. \* \* \*"

It has long been the rule in the Court of Claims that where errors in the pleading have not misled the opposite party, the pleading may be amended to conform to the proof. Thomas v. United States, 15 C. Cls. 335, 343. See also Clark v. United States, 95 U. S. 539, 543, permitting re-

covery upon the basis of quantum meruit although the petit. In was drawn upon the theory of breach of an express contract.

None of the decisions of this Court referred to by the Government holds that the absence of an allegation of bad faith precludes the setting aside of a contracting officer's or department head's decision where there has been nogdemurrer to the allegation and the proof itself shows bad faith or arbitrary and capricious conduct. In Kihlberg v. United States, 97 U.S. 398, 401, the Court observed that "There is neither allegation nor proof of fraud or bad. faith \* \* \*", but then went ahead and itself considered the question in dispute, stating that the difference between the distances found by the Government officer and the distances , by airline or by the road usually traveled were not so material as to justify the inference that he did not act with an honest purpose to carry out the real intention of the parties. Likewise, in United States v. Gleason, 175 U. S. 588, 607, 608, this Court, although pointing out that the judgment by the Government engineer could only be revised upon allegation and proof of bad faith, or of mistake or negligence so gross as to justify an inference of bad faith, nevertheless proceeded to examine the evidence and the findings of the Court below to ascertain if there was bad faith. In Sweeney v. United States; 109 U. S. 618, fraud was alleged but not proved and the Court of Claims refused to hear evidence or make findings that the work was completed in accordance with the contract requirements. The decision of the Court of Claims was then affirmed by this Court on the authority of the Kihlberg case. In Martinsburg & Potomac R. R. Co. v. March, 114 U. S. 549, the trial court overruled a demurrer to a declaration for failure to allege fraud or bad faith and this Court held that the demurrer should have been sustained. In the present case, however, the Government did not demur and proof was taken under circumstances which, as stated supra, clearly show that the Government's trial attorney was aware that

the good faith of the departmental decisions was in issue. Petitioner also cites two decisions of the United States Court of Appeals, Ninth Circuit. In Lindsay v. United States, 181 F. 2d. 582 (C. A. 9) the opinion does not show whether bad faith was alleged. It does show, however, that the Court reviewed the evidence as to the amount sought by the contractor and the amount allowed by the department head, was convinced that the proof did not support the amount claimed, and affirmed the decision of the trial court that there was no such discrepancy between the amount sought and the amount allowed as to indicate "corruption or a partisan bias", and that the Government officers did not act so inequitably as to justify the Court in setting aside their decision. In United States v. Foster Transfer Co., 183 F. 2d. 494 (C. A. 9) the trial court tried the case under pleadings which framed the issue whether the Government representative had good and sufficient cause to cancel the contract, and held that it did have such cause. The Court of Appeals, pointed out that the proof clearly would not support an allegation of fraud or gross mistake even if made and held that while the receipt of evidence on the issue of performance was a futility neither side was damaged thereby. In the present case, however, the proof does show the arbitrary and capricious character of the administrative decisions, and was received under circumstances which show that the Government trial attorney was aware that the good faith of the Government officers was in issue.

On the other hand, in Ripley v. United States, 223 U. S. 695, this Court affirmed a decision of the Court of Claims setting aside a determination found to be grossly erroneous and an act of ball faith; yet the pleadings in that case show that neither gross error or bad faith was alleged. In its brief (footnote 11, p. 18) defendant points out that the case had previously been remanded to the Court of Claims for explicit findings as to whether the Government officer acted in good or bad faith (220 U. S. 491, 496; 222 U. S. 144, 148),

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and asserts that it cannot be assumed that this Court contemplated findings of this precise character without the production of evidence directed to this particular issue. However, there is nothing in these two opinions to indicate that the Court of Claims was to take further evidence, and, as a matter of fact, an examination of that Court's docket (C. Cls. No. 28555) shows that no further evidence was taken.

The Court's attention is also directed to United States v. Smith, 256 U.S. 11, where an excavation contract described the material to be removed as consisting of "clay, sand, gravel and boulders", and made the decision of the Government engineer final on questions of quantity and quality. He ordered the contractor to remove bed rock without increase in the contract price, arbitrarily classifying it as clay, gravel, sand and boulders. Despite the Government's contention that the petition did not allege bad faith, this Court refused to follow his classification and allowed recovery for breach of warranty. In its brief (footnote 11, R. 18) petitioner asserts that in the Smith case it did not appear that any provision for departmental decision was squarely applicable to the dispute in question, and that the Court obviously did not regard the dispute as within any such provision. This position is certainly contrary to the position taken by the Government in the Smith case. Moreover, it is not seen how the Court could have held that there was a breach of warranty without setting aside the Government engineer's determination that the material in question was clay, gravel, sand and boulders rather than bed rock. Such questions would certainly come within the provision making the Government engineer's decision final as to quality and quantity.

Lastly, petitioner appears to argue that proofs should have been directed to the single issue of bad faith or error so gross as to imply bad faith. In cases of this kind, however, such questions are necessarily so inter-related with the merits of the dispute that, as a practical matter, it is ex-

tremely difficult, if not impossible, to separate the two. In this connection it should be remembered that it has long been the practice in the Court of Claims to try the case before a Commissioner, who hears the evidence and makes findings of fact, but does not make findings or recommendations as to liability. Under this practice the Court itself then determines the legal consequences of the facts, and, if it determines that the decision of the Government officer should be set aside, it then awards damages to the plaintiff upon the basis of the Commissioner's report and the proof previously taken in the case. Respondents are not award of a single case under this practice where the Government has taken the position that proof should be limited to the single issue of good faith.

C. The proof in the case shows that the departmental decisions were not made in good faith.—As shown supra, pp. 7-12, the decision of the Court below, setting aside the department head's decision because of the arbitrary and capricious methods of computation used by him, comes within the principles of judicial review laid down by this Court. However, even if this Court should hold that the Court below must expressly find that the decision was made in bad faith, or was so grossly erroneous or negligent as necessarily to imply bad faith, or was the result of a failure to exercise an honest judgment, respondents submit that the proof supports such a finding, and that the case should therefore be remanded with instructions for a more explicit finding on the question of good faith.

The undisputed proof in this case shows the following: The Associated General Contractor's schedule sets forth pronthly rates for equipment for use on one-shift operation and provides that such monthly rates are not subject to deductions for idle time but should be charged for the full calendar period elapsing between shipment to and from the job. It also provides that one-half of the first shift rate should be paid on second shift operations (Pltfs. Ex. 17-B, Appendix B, pp. 27-28, infra). The Bureau of Reclamation's

Equipment Rental Schedule is based on the Associated General Contractor's schedule, and is designed to provide reasonable rental rates for payment to contractors on cost plus work. It likewise contains monthly rental rates for one-shift operation and provides for payment of one-half the first shift rate for second shift operation (Pltfs. Ex. 17-C; pp. 181, 327, of Appendix C to Brief for the United States). As in the case of the A. G. C. monthly rate, the Bureau's monthly rates are paid for the full calendar period that the equipment is assigned to the job without deduction for the time that the equipment is idle due to weather, repairs or Sundays (App. C, pp. 331-333, 352, 355-357).

The method followed by the contracting officer in reducing the Bureau's monthly rental rates to hourly rates was to divide the monthly rate by 30 to get a daily shift rate for first shift operation, add one-half of the first shift daily rate for second shift operation, and divide this total by the 16 hours in a two-shift day to get an hourly rate (Pltfs. Ex. 17, pp. 70-77, Defts. Exs. 17-V, 17-W; App. C, pp. 96-98, 327, 331, 344). It is obvious that such an hourly rate when applied to hours of actual operation makes no allowance for the time that the equipment was idle dud to weather and repairs and that it would not yield the monthly rate unless the equipment worked 16 hours a day, 30 days a month (App. C, pp. 98-99).

In the appeal to the head of the department, the contractor pointed out that the contracting officer's method of reducing the monthly rates to hourly rates automatically deprived the contractor of the allowance for idle time which he would receive under the monthly rate (Pltfs. Ex. D, pp. 56-57). The appeal also showed in detail the method used by the contracting officer in computing his hourly rental rates (Id., pp. 59-66). The contracting officer's decision itself advised that the hours to which the hourly rates were applied

<sup>&</sup>lt;sup>8</sup> Appendix C to the Brief for the United States consists of the pertinent portions of the testimony in this case, and will hereinafter be cited as "App. C".

were hours of operation (Pltfs. Ex. C, pp. 47, 50, 282). In addition, the department head was furnished by the contracting officer with a copy of the Associated General Contractor's schedule and was advised that it contained the fundamentals on which the rates in the Bureau's schedule were based (Defts. Ex. 17-V).

The department head then handed down his findings and decision in which he stated that the equipment rental rates used by the contracting officer were those set out in the Bureau's schedule, and that the rates in the Bureau's schedule were based on the Associated General Contractor's schedule, and take into account idle time (App. B to Brief for United States, pp. 46-47).

It is quite true that the monthly rates in the Bureau's schedule and the Associated General Contractor's schedule make an allowance for idle time and are paid for the full calendar period without deduction for the time that the equipment is idle due to weather, repairs and Sundays. The department head's decision simply ignored the real complaint which was that the contracting officer reduced these monthly rates to hourly rates by a method which obviously made no allowance for idle time whatsoever when applied to hours of actual operation. The only explanation of such a decision is that he consciously approved an hourly rental rate arrived at by a method which he knew was unfair, or that he was indifferent to what the dispute was about. In the one case he would be guilty of bad faith or failure to exercise an honest judgment; in the other of error or neglifence so gross as necessarily to imply bad faith.

The same is true with respect to his decision approving the contracting officer's hourly rates for maintenance of equipment. Here, the proof shows:

The hourly rates for field repairs and maintenance used by the contracting officer in his adjustment under Order for Changes No. 3 were not based on costs on respondents' job (App. C, p. 358). They represented only a small fraction of respondents' actual cost of maintenance and field

repairs on this job. While the subordinates who prepared the hourly rates for maintenance and field repairs used by the contracting officer in making his adjustment testified that such rates were based upon the costs of the Bureau and certain other governmental agencies, they were unable to give any details or explain just how they arrived at such hourly rates. While one of them was requested to furnish the Court the deca he was supposed to have considered in arriving at such hourly rates, he never did so nor did the Government ever account for his failure to do so (App. C. pp. 327, 328, 333, 346, 354, 355). On the other hand, the explanation of these rates which the contracting officer furnished to the contractor shows on its face that such rates did not purport to be based on costs on any job, but were described as "assumed" or were merely percentages of his hourly rental rates which themselves were grossly unfair (Defts. Ex. 17-W). The only maintenance rate which purported to be based on another job was that for the jackhammer, described as the approved rate on Shasta Dam. On the jackhammer, having a capital value of \$205, the contracting officer allowed a maintenance rate of 20 cents per hour compared to only 23 cents per hour on a RDS caterpillar trac or having a capital value of \$7905, and only 30 cents per hour on a Lima Dragline having a capital value of \$39,189 (Defts, Ex. 17-W).

In the appeal to the head of the department the contractor complained that the contracting officer's figures for maintenance were far below the actual cost of maintenance and pointed out that high maintenance costs were experienced in operating in these cobble materials (Pltfs. Ex. D, pp. 51-55, 57, 58). Attached to the appeal as Exhibit Y

Respondents introduced evidence of the actual cost of field repairs and maintenance during the 1940 season when the work in question was performed, and divided such costs by hours of operation to obtain the hourly cost (Pltfs. Ex. 17-D; App. C, pp. 80-92). Although during the trial of this case the Government auditor checked respondents' cost records at their office he was never called as a witness (App. C. p. 536).

was the above-mentioned explanation of the contracting officer's maintenance rates which he had given to the contractor (Id., pp. 59-66).

In his decision on appeal the department head approved the maintenance rates used by the contracting lofficiar, stating that they were determined on the basic of experience of the Bureau and other governmental agencies (App. B to Brief for the United States, p. 48). No attempt was made to check the actual costs of maintenance on the job although paragraph 8 of the specifications gave the Government the right to do so (App. A, infra, pp. 24-25). As stated before, the department head had before him the contracting officer's letter explaining to the contractor the basis of the hourly rates for maintenance used in the adjustment. This explanation showed on its face that these rates were not based on any job but were assumed and were fixed percentages of hourly rental rates which the department head knew or should have known were themselves grossly unfair.

In view of the above respondents submit that the proof would support a finding that the findings and decision of the head of the department approving the hourly rental rates and hourly maintenance rates used in the contracting officer's adjustment were not in good faith, or were not the exercise of an honest judgment, or were so grossly erroneons or negligent as necessarily to imply bad faith. Under these circumstances, if this Court should hold that the Court below was not justified in setting aside the decision of the head of the department on the basis of a finding that the methods of computation used by him were arbitrary and capricious, the case should be remanded to the Court of Claims with instructions for a more explicit finding on the subject of good faith. As stated supra, pp. 15-16, this was done in the Ripley case, although the pleadings in that case did not allege bad faith or gross error.

Petitioner seeks to give some rational basis for the equipment rental rates used in the adjustment under Order for Changes No. 3 by pointing out that the Associated General Contractor's schedule itself indicates that it is not an inflexible tariff and that its rates should be applied in the light of experience. Petitioner then contends that because the equipment was constantly shifting back and forth between the work under Order for Changes No. 3, and other items of work, it was therefore reasonable for the contracting officer and the head of the department to assume that the contract unit prices for the other items of work provided adequate compensation for any time that the equipment was idle. Thus, asserts petitioner, the inclusion of an idle time factor for additional work not contemplated in the original contract would necessarily result in duplication.

This contention is without merit. There is nothing in the record which remotely indicates that the contracting officer, the department head, or any one else ever took into account any such theory as a justification for the method by which they reduced their monthly rates to hourly rates. Moreover, even if they had relied on any such theory they would have been completely unjustified in doing so. In the first place, if it be assumed that the Associated General Contractor's schedule is intended only as a guide, nevertheless the Bureau itself has prepared its own schedule of rates, based on the Associated General Contractor's schedule. All field offices of the Bureau are required to and do use the rates in the Bureau's schedule in preparing extra work orders on a cost plus basis (Pltfs. Ex. 17-C, App. C, pp. 325, 330, 331, 340).

In the second place, the Government, asserting that it is reasonable to assume that the contract unit prices paid for other items of the contract work provided adequate compensation for idle time for the equipment, would have these contract unit prices absorb all the idle time of the equipment whether it occurred during times that the equipment was assigned to work covered by these contract unit prices or during times when it was assigned to the cost plus work covered by the Order for Changes No. 3. Thus,

under defendant's theory, none of the idle time customarily paid for under the Bureau's own monthly rental rates would be allowed in Order for Changes No. 3. This is manifestly unfair as some equitable share of the allowance for idle time should be credited to this cost-plus work. What the Court of Claims has done is to arrive at an hourly rental rate which, when applied to hours of actual operation. makes allowance for the idle time customarily paid for in the monthly rate. Such hourly rental rate was then applied only to hours of actual operation on the work covered by Order for Changes No. 3 (R. 127-129). It is, therefore, clear that no duplication of payment for idle time is involved. No duplication would occur unless such hourly rental rate had been applied not ally to the hours of operation under Order for Changes No. 3, but also to the hours of operation on the other work to which the contract unit prices were applicable.

### CONCLUSION

For the foregoing reasons, it is respectfully submitted that the judgment below should be affirmed.

HARRY D. RUDDIMAN,
JOHN W. GASKINS,
Attorneys for Respondents.

Остовев, 1961.

#### APPENDIX A

## Article 3 of the contract provides:

Changes,-The contracting officer may at any time, by a written order, and without notice to the sureties. make changes in the drawings and/or specifications of this contract and within the general scope thereof. If such changes cause an increase or decrease in the amount due under this contract, or in the time required for its performance, an equitable adjustment shall bemade and the contract shall be modified in writing accordingly. No change involving an estimated increase or decrease of more than Five Hundred Dollars shall be ordered unless approved in writing by the head of the department or his duly authorized representative. Any claim for adjustment under this article must be. asserted within 10 days from the date the change is ordered: Provided. however, That the contracting officer, if he determines that the facts justify such action, may receive and consider, and with the approval of the head of the department, or his duly authorized representative, adjust any such claim asserted at any time prior to the date of final settlement of the contract. If the parties fail to agree upon the adjustment to be made the dispute shall be determined as provided in article 15 hereof. But nothing provided in this article shall excuse the contractor from proceeding with the prosecution of the work so changed.

## Article 15 of the contract provides:

Disputes.—Except as otherwise specifically provided in this contract, all disputes concerning questions of fact arising under this contract shall be decided by the contracting officer subject to written appeal by the contractor within 30 days to the head of the department concerned or his duly authorized representative, whose decision shall be final and conclusive upon the parties thereof. In the meantime the contractor shall diligently proceed with the work as directed.

### Paragraph 8 of the specifications provides:

8. Data to be furnished by contractor.—The contracting officer, through his authorized agents, shall have

access to all pay rolls, records of personnel, invoices of materials, and any and all other data relevant to the performance of the contract or necessary to determine its cost, and the contractor shall furnish at the end of each month an itemized statement in a form, satisfactory to the contracting officer of the cost of all work under the contract.

#### APPENDIX B

The Schedule of Contractors Ownership Expense, issued by the Associated General Contractors of America (Plfts. Ex. 17-B), provides in part:

#### Fereword.

The general plan of presentation is the same as the last previous edition which made its appearance in 1930. The items of equipment ownership expense are expressed as a percentage of the original capital investment. Every endeavor has been made to gather authentic information as to cost experience. The percentage rates set up for the various items represent an approximate average of conditions under which the equipment has been operated.

The percentage rates are subject to adjustment to fit the experience of the individual contractor. It is intended that this schedule prove useful as a basis or guide, but it is recognized that individual experience may vary from the average within a fairly broad bracket. Some of the factors justifying adjustment of the rates shown are: weather conditions—where the equipment is located—whether in the south where the construction season is long as contrasted with the relatively short season of the north; exposure of the equipment, i.e., the relative rigor of the work at hand; care of the equipment, both in operation and maintenance.

The A. G. C. schedule ends with the development of average annual cost expressed as a percentage of capital investment. From this a monthly use rate is developed, also expressed in percentage of cripital investment.

In order to make the schedule as useful as possible, a price representing the original cost of standard high grade equipment is given. To demonstrate the operation of the schedule, the calculated per cent per month has been applied to the price given, and a cost per month expressed in dollars has been calculated.

In using this schedule it should be remembered that it contains no element of profit or return sufficient to justify continuous reinvestment in construction equipment for rental to others. The rates shown will not ordinarily be rates on which a concern engaged in renting equipment could exist. A contracting firm desiring to rent its equipment would need to add a ready-to-serve charge to cover overhead in addition to a profit.

EXPLANATION OF ITEMS OF EQUIPMENT OWNERSHIP EX-PENSE. CONTRACTORS' ANNUAL EQUIPMENT EXPENSE.

Annual equipment as treated in the accompanying schedule embraces those items that are more or less constart and cannot ordinarily be determined accurately for a specific project. It does not include loading, shipping, erecting, operating or dismantling, nor does it include fuel, lubricates, supplies, wages or transportation of operating crews or any of the contractor's general expense of doing business. Minor or field repairs are not included because they are generally regarded as job or operating costs that require special study for each project, and because they are generally carried as a cost of the work on cost plus a fee operations. The annual equipment expense is composed of but six items, which are as follows: (1) Depreciation, (2) Major Repairs and Overhauling; (3) Interest on the Investment, (4) Storage, Incidentals and Equipment Overhead, (5) Insurance and (6) Taxes.

These six items are expressed as percentages of the capital investment, and the capital investment is considered as the original cost of the machine f.o.b. factory or point of shipment, plus the expense of freight to the contractor's initial unloading or receiving point, plus the cost of assembling, testing and making ready for use. Any similar expenses incurred after the initial set-up are not included in the investment.

## Major Repairs and Overhauling.

Major or shop repairs include those items of heavy repair which usually keep a machine idle for an extended period in contrast with minor or field repairs which entail comparatively little delay and which are necessary to keep the machine in operation. Such repairs include overhauling and painting at the contractor's shop or yard, but do not include rebuilding.

## Monthly Equipment Expense.

The annual equipment expense explained in the preceding paragraphs must be recovered by a contractor from work that he performs. To do this it is necessary to establish for each item a monthly charge of such amount that when multiplied by the average number of working months it will yield a revenue equal to the annual expense. In other words, the monthly charge for any item equals the annual expense divided by the average number of months during which the machine is in use. It varies extremely, depending on the type of equipment, the climate, nature of the work, business conditions and other factors.

The average number of working months for each item of the schedule is based on average climatic conditions for the nation as a whole, such as usually prevail

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IN THE

# Supreme Court of the United States

OCTOBER TERM, 1951

No. 11

THE UNITED STATES, Petitioner,

MARTIN WUNDERLICH, ANN M. WUNDERLICH, MARIE WUNDERLICH, E. MURIELLE WUNDERLICH and THEODORE WUNDERLICH, a Partnership, Trading Under the Name of Martin Wunderlich Company.

On Writ of Certiorari to the Court of Claims.

BRIEF FOR RESPONDENTS

HARRY D. RUDDIMAN,
JOHN W. GASKINS,
Attorneys for Respondents.

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### BRIEF FOR RESPONDENTS

#### OPINION BELOW

The opinion of the Court of Claims (R. 159-170) is reported at 117 C. Cls. 92.

#### JURISDICTION

The judgment of the Court of Claims was entered on June 5, 1950 (R. 170). A motion for a new trial, filed on August 14, 1950, was denied on October 2, 1950 (R. 171). By order of the Chief Justice, dated December 26, 1950, the time for filing a petition for a writ of certiorari was extended to and including March 1, 1951 (R. 174). The petition, filed on February 28, 1951, was granted on May 7, 1951 (R. 175). The jurisdiction of this Court rests upon 28 U. S. C. 1255.

## QUESTIONS PRESENTED

- 1. Whether, under the standard form of Government construction contract, the determination by the head of the department of the amount of an "equitable adjustment" for changed work may be set aside upon a finding that the methods of computing the adjustment used by him were arbitrary and capricious and the results arrived at by such methods were growsly erroneous.
- 2. Whether the Court of Claims may set aside such a determination in the absence of an express allegation of bad faith, or such gross error or negligence as necessarily implies bad faith, or failure to exercise an honest judgment.
- 3. Whether the proof would support a finding of bad faith, or such gross error or negligence as necessarily implies bad faith, or failure to exercise an honest judgment.

#### CONTRACT PROVISIONS INVOLVED

Pertinent provisions of the contract and specifications are set forth in Appendix A, infra, pp. 24-25.

Petitioner asserts that one of the questions involved whether the determination of the amount of an "equitable adjustment" is a question of fact within the standard form government contract provision that a department head's decision on "all disputes concerning questions of fact arising under this contract \* \* shall be final and conclusive upon the parties thereto". As shown, infra, pp. 5-7, this question is not presented here since the Court below did not hold that such a determination did not involve a question of fact.

#### STATEMENT

Respondents do not object to the Statement in petitioner's brief except as follows:

The full paragraph appearing on page 5 of petitioner's brief is not supported by the citations to the record. The following should be inserted in lieu of such paragraph:

For the contractor's maintenance and repair rates the contracting officer substituted rates purportedly determined from experience on other jobs. His rates were generally computed at a certain percent of the rental rates. In only one instance does his schedule indicate that the repair and maintenance rates were taken from another job. Applying his rates to the number of hours actually used the contracting officer allowed only 5.28% of respondents' actual total cost of field repairs and maintenance for the season compared to 43% of such actual total cost allocable to the work under Order for Changes No. 3 (R. 129-130).

Respondents also object to the paragraph beginning at the bottom of page 5 of petitioner's brief and ending on page 6 as being incomplete. The following should be inserted in lieu thereof:

The Bureau's equipment rental schedule and the Associated General Contractor's schedule on which it is based, set forth monthly rental rates for single shift operation of 8 hours per shift, which monthly rates are arrived at by dividing the average annual equipment ownership expense by the number of calendar working months, usually eight, that the equipment is normally used. These schedules also provide for a daily shift rate at 1/30 of the monthly rate, and provide for payment of one-half the first shift rate for second shift operation (R. 125-126, 127; Pltfs. Exs. 17-B and 17-C). The Associated General Contractor's schedule (Pltfs. Ex. 17-B)<sup>2</sup> provides that the monthly rate is not subject to

<sup>&</sup>lt;sup>2</sup>Pertinent provisions of the Associated General Contractor's schedule (Pltfs. Ex. 17-B) are set forth in Appendix B, infra, pp. 25-28.

deductions for idle time but should be charged for the full calendar period elapsing between shipment to and from the job. It likewise provides that the daily shift rate should be charged for each calendar day without deductions for idle time during the period it is assigned to the job.<sup>3</sup>

The Bureau's monthly rates could not be applied directly to the work covered by Order for Changes No. 3 since the equipment was shifting back and forth between such work and other work on the job. Since records of the hours of actual operation were kept, the contracting officer used an hourly rate which was computed by dividing the Bureau's monthly rate by 30 to obtain a daily first shift rate, adding one-half of this amount for the second shift rate, and dividing the total by 16 hours to obtain an hourly rate to be applied to hours of actual operation. Such hourly rates made no allowance for idle time and would have required the respondents to operate 16 hours a day, 30 days a month, without any interruptions for weather, minor repairs or the like, in order to recoup the monthly rate (R. 127, Deft. Exs. 17-V, 17-W).4

#### SUMMARY OF ARGUMENT

Since the Court of Claims did not hold that a dispute as to the amount of an "equitable adjustment" was not a question of fact, this case does not involve any question

<sup>&</sup>lt;sup>3</sup> The only witnesses who testified for petitioner on the subject, including the subordinate in the contracting officer's office who prepared the hourly rates used in the "equitable adjustment", admitted that the Bareau's own monthly rates likewise are paid for the full period that the equipment is assigned to the job without deduction for idle time due to such factors as holidays, weather and repairs. See pp. 331-333, 352, 355-357 of Appendix C to Brief for the United States.

Moreover, most of the equipment was on second shift work only about 80 percent of the time it was on first shift work (R. 127). Thus, in addition to failure to reimburse respondents for the idle time customarily paid for in the Bureau's own monthly rates, petitioner's rates are also obviously unfair in that they gave equal weight to the much lower second shift rate even though the equipment was used much more on first shift operation.

whether the decision of the Court below is in conflict with United States v. Callahan Walker Co., 317 U. S. 56.

The decision of the Court below setting aside the adjustment under Order for Changes No. 3 because of the arbitrary and capricious treatment of respondents' claim is in accordance with the principles of judicial review laid down by this Court. An express allegation that such adjustment . was arbitrary and capricious, or was the result of bad faith, or the failure to exercise an honest judgment, or was so grossly erroneous or negligent as to imply bad faith, is not necessary in order to set aside such a determination, especially where the Government trial attorney was aware that the good faith of such determination was in issue. Even if this Court should hold that the department head's decision may not be set aside upon a finding that the methods of computation used by him were arbitrary and capricious, and that there must be a finding that his decision was not made in good faith, or in the exercise of an honest judgment, or was so grossly erroneous or negligent as necessarily to imply bad faith, the proof would support such a finding. In such event the case should therefore be remanded for more explicit findings on the question of good faith.

### ARGUMENT.

I. The Court of Claims Did Not Hold That the Determination of the Amount of an "Equitable Adjustment" Was Not a Question of Fact.

Petitioner asserts that it would appear that the Court of Claims held that the dispute as to the amount of the "equitable adjustment" allowed on Claim No. 17 did not involve a guestion of fact and was not governed by Article 15 of the contract. Thus, petitioner states, the decision of the Court below conflicts with the decision of this Court in United States v. Callahan Walker Co., 317 U. S. 56, holding that such a dispute did involve inquiries of fact to which the provisions of Article 15 were applicable.

Respondents have never contended, nor did the Court of Claims hold, that the dispute over the amount allowed in the change order involved in Claim No. 17 was not a dispute relating to a question of fact.

It is true that in the introductory part of its opinion (R. 161-166), before taking up any of the claims, the Court below held that Article 15 of the contract? covering disputed questions of fact, did not apply to disputed questions of law, i.e., interpretation of the contract documents. It also distinguished the provision of the specifications involved in United States v. Moorman, 338 U.S. 457, from paragraph 14 of the specifications in the present cases, pointing out that paragraph 14 did not purport to make the decision of the contracting officer or head of the department final on questions of interpretation of the contract documents where the contractor had followed the prescribed procedure for Administrative relief as far as possible to do so, whereas the specifications in the Moorman case made the departmental decisions on such questions final even though the prescribed appeal procedure had been followed. A reading of this introductory part of the opinion shows, however, that it was directed to a situation where the contracter protested certain work as being outside the requirements of

<sup>&</sup>lt;sup>5</sup> Paragraph 14 of the specifications (R. 72) provides: 14. Protests.-If the contractor considers any work demanded of him to be outside the requirments of the contract, or considers any record or ruling of the contracting officer or of the inspectors to be unfair, he shall immediately upon such work being demanded or such record or ruling being made, ask for written instructions or secision, whereupon he shall proceed without delay to perform the work or to conform to the record or ruling, and, within 10 days after date of receipt of the written instructions or decision. he shall file a written protest with the contracting officer, stating clearly and in detail the basis of his objections. Except for such protests or objections as are made of record in the manner herein specified and within the time limit stated, the records, rulings, instructions, or decisions of the contracting officer shall be final and conclusive. Instructions and/or decisions of the contracting officer contained in letters transmitting drawings to the contractors shall be considered as written instructions or decisions subject to protest or objections as herein provided.

the contract documents, requested written instructions, but the Government representative refused to issue written instructions, saying that the work was required under the This situation prevailed with respect to practically every claim but Claim No. 17. . In that claim, however, there was no failure to issue written instructions nor is there any dispute as to the interpretation of the contract documents. On the contrary, by issuing Order for Changes No. 3 (R. 120-121) the contracting officer gave the necessary wriften instructions and admitted that the work required was a change in the contract requirements.

Moreover, in the portion of the opinion dealing specifically with Claim No. 17 (R. 167-169) the Court of Claims points out that the dispute in this claim is as to the amount of the cost of the work, and does not even suggest that any question of interpretation of the contract documents is inwolved. Rather, the opinion shows that the reason for setting aside the adjustment under Order for Changes No. 3 was the arbitrary and capricious administrative treatment

of the claim.

In view of the above, respondents submit that the Court of Claims did not treat this claim as involving a disputed question of law rather than of fact, and that accordingly its decision is not in conflict with United States v. Callahan Walker Co., supra.

II. The Decision of the Court Below Is in Accordance with the Principles of Judicial Review Laid Down by This Court.

A. The departmental findings and decision can be set aside if arbitrary and capricious.-This Court, in its early decisions, laid down the rule that where a contract makes the decision of a designated official final on certain questions, such decision may not be reviewed by the courts in the absence of fraud, or bad faith, or such gross mistake or negligence as would necessarily imply bad faith, or a failure to exercise an honest judgment. Kihlberg v. United States,

97 U. S. 398, 402; Sweeney v. United States, 109 U. S. 618, 620; Martinsburg & Potomac Railroad Co. v. March, 114 U. S. 549, 554; United States v. Gleason, 175 U. S. 588, 607.

Such terms as "bad faith" or "failure to exercise an honest judgment" are difficult of precise and exact definition. However, this Court, in later cases has given guides as to the meaning of such terms. For example, in Ripley v. United States, 223 U. S. 695, 701, 702, this Court stated that "the very extent of the power and the conclusive character of his decision raised a corresponding duty that the agent's judgment should be exercised—not capriciously or fraudulently, but reasonably and with due regard to the rights of both the contracting parties." In Saalfield v. United States, 246 U. S. 610, 613, this Court stated that "the Chief of Ordnance and his superior officer, the Secretary of War, were to decide, not arbitrarily, but candidly and reasonably, whether the gun had satisfied the required test"."

From the above it is clear that an officer empowered by both parties to make a final decision has not performed his duty under the contract where his decision is arbitrary and capricious, or without rational basis, or cannot be regarded as an attempt to render an impartial decision.

It is, therefore, submitted that where, as in the present case, the contracting officer and the head of the department have used methods of computing the amount due under a change order which were found to be arbitrary and capricious, they cannot be said to have performed their duty under the contract to make their decisions candidly and reasonably, and with due regard to the rights of both parties.

As stated before, these officers used a method which reduced the Bureau's own monthly rental rates for equipment to hourly rental rates to be applied to hours of actual operation, and did so in such a way as to make no allowance

The contract in that case provided that the Chief of Ordnance should determine disputes as to the meaning of the contract documents, subject to appeal to the Secretary of War whose decision should be final. See p. 612 of the opinion.

for the idle time paid for in their monthly rates, thus making it impossible for the contractor to ever recover the monthly rate. This vital defect was pointed out in the contractor's appeal (Pltfs, Ex. D, pp. 56-57) but was completely ignored by the department head in his findings and decision (see Appendix B, pp. 45-49, of Government's brief). Certainly, his indifference to the factual question presented, his failure to make a finding on the real question in dispute, and his approval of such obviously unfair hourly rental rates can lead to no other conclusion than that his decision was arbitrary and capricious, was without rational support, and was not the result of an honest attempt to render an impartial decision.

Petitioner asserts that judicial interference is precluded except where there is "a dishonest judgment" or "actual dishonesty" upon the part of the department head (R. 20, 29). It does not specify just what it means by the phrases but perhaps the Government means that it must be shown that the decision may not be set aside unless it was the re-

sult of something in the nature of a bribe.

No such rule can be spelled out of the decisions of this Court. For example, in Ripley v. United States, 223 U. S. 895, a contract for the completion of a jetty provided that a mound of riprap should be placed over and around the existing structure, and that when in the judgment of the Government agent in charge it had become sufficiently consolidated, large blocks should then be bedded in the crest. This Court set aside a decision of such agent refusing permission to place the crest blocks, upon a finding by the Court of Claims (p. 700) that the agent knew that large parts of the core were fully settled and ready for the placement of crest blocks at the time of his refusal, and that the refusal to allow the crest blocks to be placed when he knew that large parts of the core had fully settled and consolidated was gross error and an act of bad faith. There is nothing to indicate that the Government agent's decisionwas the result of anything in the nature of a bribe. Rather,

the basis of the decision is that the Government agent's decision was a breach of his duty to exercise his judgment reasonably, not capriciously, with due regard to the rights of both contracting parties. His failure to permit the contractor to go ahead with the work when he know that the conditions prevailing should, under the contract, have permitted the work to go ahead, was held to be an act of bad faith. Similarly, in the present case, when the department head knew, or at least should have known from the information presented to him, that the method used by the contrecting officer in reducing the Bureau's own monthly rental rates to hourly rates was unfair, it was an act of bad faith on the part of the department head, or a failure to exercise an honest judgment, when he gave perfunctory approval to the contracting officer's hourly rates in a finding and decision which ignored the unfair method of arriving at such rates.

When this Court speaks of exercising an honest judgment it is clear that it means that the Government officer is under a duty to make a sincere and serious attempt to exercise his judgment reasonably and impartially. It cannot be said that the department head in the present case made any such attempt in his decision approving the contracting officer's rental rates.

Nor can he be said to have made an honest attempt to arrive at equitable rates for repair and maintenance when he approved the contracting officer's schedule of rates, which, while purportedly based on experience of the Bureau and other agencies, itself indicates that in only one case was the repair and maintenance rate taken from another job, the others being computed at a certain percent of the hourly rental rates which themselves were arbitrary and inadequate. The findings also show that such repair and maintenance costs represented only a small fraction of the contractor's actual cost for repair and maintenance (R. 129-130).

Moreover, Article 15 of the contract, providing for finality of departmental determinations of disputed questions

of fact, should be considered together with Article 3 (Appendix A, infra, p. 24). This article makes it the duty of the contracting officer and the head of the department to make an "equitable adjustment" when a change is ordered. Such words certainly connote that the adjustment must be fair and impartial. It is therefore submitted that construing Article 15 in the light of Article 3, a determination of an amount due under a change order which cannot be said to be fair and impartial, but which is arbitrary and capricious is not final and conclusive.

In its brief (pp. 14-15) petitioner contends that the purpose of Article 15 is to avoid the expense and delay of litigation, that the Government has bought and paid for this provision, and that its purpose will be defeated if parties can nullify the provision if they are dissatisfied with a decision by which they have agreed to be bound. The answer is, of course, that the basis of setting aside the adjustment in the present case was not mere dissatisfaction with the departmental decision but rather its arbitrary and capricious nature. Moreover, the desirability of avoiding litigation is only one aspect of Article 15. While a literal reading of this article would lead to the conclusion that departmental decisions on questions of fact could not be set aside for any reason, this Court has refused to accord finality to such decisions where they violate fundamental standards of fair play.

Petitioner also contends (p. 14) that the advantage of competitive bidding will be lost if the successful bidder is later permitted to disregard Article 15 which, petitioner asserts, undoubtedly was given substantial weight in the bids of others. Here again petitioner's argument is based on the fallacious assumption that the Court below held that Article 15 may be disregarded. Moreover, it is certainly doubtful that the bidders on this contract or any other contract would assume that they would be bound by arbitrary and capricious decisions. Indeed, if such a rule were ever adopted by this Court the inevitable result would be that

in the central states, upon normal business conditions, and upon normal seasonal fluctuations of the industry. Where the average number of working months shown does not fit the experience of a specific contractor, the contractor should substitute the number indicated by

his own experience.

The monthly expense rates are based on a single operating shift of 8 hours per day. Where the equipment is used on double or triple shifts, an additional charge of 50 per cent of the single shift rate for each such additional shift of 8 hours should be made. Charges for use in excess of one shift but less than a full additional shift should be made at a rate proportional to the extra shift rate. The monthly rate is not subject to deductions for Sundays or holidays and should be charged for the full calendar period elapsing between shipments to and from the job.

## Daily Equipment Expense.

Since the idle time of equipment is taken care of by a factor in the monthly expense, no such factor should be used in computing a daily rate. The daily rate is derived simply by dividing the monthly rate by thirty. When a machine is charged to a job on a daily basis, the rate should be charged for each calendar day without deductions for Sundays, holidays, or other idle time during the period it is assigned to the job.

The period to be charged is the full time elapsing

between shipment to and from the job.

